THE

Journal of the American Medical Association.

EDITED UNDER THE DIRECTION OF THE BOARD OF TRUSTEES.

PUBLISHED WEEKLY.

VOL. XIV. CHICAGO, FEBRUARY 8, 1890. No. 6.

ORIGINAL ARTICLES.

INFANTILE MORTALITY: ITS CAUSATION AND ITS RESTRICTION.

Read in the Section of State Medicine at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY VICTOR C. VAUGHAN, M.D., Ph.D.,

PROFESSOR OF HYGIENE AND PHYSIOLOGICAL CHEMISTRY IN THE UNIVERSITY OF MICHIGAN, DIRECTOR OF THE MICHIGAN STATE LABORATORY OF HYGIENE, MEMBER OF THE MICHIGAN STATE BOARD OF HEALTH, MEMBER OF THE GERMAN CHEMICAL SOCIETY, HONORARY MEMBER OF THE FRENCH SOCIETY OF HYGIENE, ETC.

That the death-rate during the first five years of life should be higher than for the same number of years at any subsequent period might be expected to be true. There are many factors contributing to this result. Some of these are easily recognized, and might be largely eliminated without any great effort. Others are evident, but can not be prevented without radical changes in social life, while still others are obscure. So long as the weak as well as the strong continue to procreate their kind, infantile mortality will be great. So long as tuberculosis, syphilis, and even idiocy are not regarded as bars to the reproduction of the species, weak, diseased and mentally incompetent children will be born; and looking at it from a philosophic standpoint, it is better for the future of the race that many of these should die, but it would be better still had they never been born. "Multiply and replenish the earth" is followed with more persistency than any command of the decalogue, and too often without any thought of the kind of material with which the earth is being replenished. However, as deplorable as this thoughtless and often sinful assumption of paternity and maternity is, it is not so bad as the criminal means often resorted to in order to prevent it. Great infantile mortality is not so disastrous to the progress of the race as is fœticide.

It is the purpose of this paper to ascertain, 1, what the infantile death-rate is; 2, what are its most potent causes; and, 3, what measures might be resorted to in order to lessen it.

The number of births reported as having occurred in the United States during each of the census years ending June 1, 1860, 1870 and 1880, were respectively 1,072,090, 1,287,670 and 1,577,133. [See mortality volumes of the census reports for these years.] According to the mortality rate of the census year 1870, found by adding 41 per cent. to the deaths reported, the number of those born in the United States which reached 5 years of age are for those born in 1860, 784,545; for 1870, 942,304; and for 1880, 1,153,144. In other words, of those born in 1860, 26.8 per cent. died under 5 years of age, and this figure practically holds good for the years 1870 and 1880. Thus, a little more than one-fourth of the children born in this country die before they reach 5 years of age. Of the deaths under 5 years of age in 1880, 57.8 per cent. occurred during the first year.

Having ascertained the death-rate among infants, the next inquiry will be in regard to the causation of this mortality, which must be regarded as high. In the first place, is there any difference in the death-rate among those born and reared in cities and those born to the rural population? The following table gives us the best information which I am able to secure on this point:

TABLE 1.—Exhibiting the reported number of births and of deaths of those under one year of age in the United States during the census year 1880, classified in rural and city (49 large) populations, with distinction of sex. (Compiled from the Tenth Census of the United States, 1880, Vol. XXII, Mortality and Vital Statistics, Part 2, p. 634.)

		UNDER ONE YEAR OF AGE.			
Population.	Sex.	Tot. births during the Census Year 1880.	Deaths per 1,000 during Census Year of those Born Within the Year.	Deaths	Deaths per 1,000 of living population.
Rural—Total .	M.	690,095	78.1	70,700	111.1
	F.	658,546	63.0	56,909	92.2
		1,348,661	141.1	127,609	203.3
Cities (49 large) Total	M.	116,851	162.4	26,149	267.2
	F.	111,761	132.8	21,426	221.1
		228,612	295.2	47,575	488.3

NOTE.—For the names of these 49 cities, see pages 80–82, and 634, of the volume mentioned in the heading of this table.

Table 1 shows that infantile mortality is much greater in urban than in rural populations. This is undoubtedly due to a number of causes, some of which we can better appreciate after we have ascertained the diseases to which the great mortality is due. However, there is one point to

which I desire to call attention here. It might be supposed that the children born in cities are weaker naturally than those born in the country. In only the largest cities is the death-rate among children due to debility higher than in the country, and this is caused, to a large extent, by crowding, by want of proper food, and by neglect. Dr. Würzburg says: "According to Dr. L. Pfeiffer the death-rate from debility is seemingly greater in the larger than in the smaller cities. This supposition seems to obtain in a certain sense in Prussia, for the deaths from debility during the years 1878–1880 in seven cities with more than 100,000 population were 35.7, 36.7, and 38.7 per 1,000; and in sixty-one cities with populations of from 20,000 to 100,000, only 28.5, 29.4, and 29.9. These figures indicate that the death-rate from debility is decidedly greatest in the larger cities, while the average death-rate from debility in all the cities is yet lower than that in the rural districts. The high death-rate of illegitimates is an important factor in the cities; thus, Köln, with a death-rate of all infants of 24.06 per cent., loses 27.48 per cent. of those illegitimately born."

The death-rate from debility during the first year of life was, during the years 1875–77, for each 1,000 living children born in the whole of Prussia, 30.4; for those born in the cities, 28.9; for those born in the rural districts, 31.1. These figures show that the high mortality of children born in cities is not due to general debility or weakness of constitution, and show us that we must look for an explanation from some other source. In this search let us ascertain, from the following tables, to what diseases infantile mortality is most largely due.

TABLE 2.—Exhibiting the number of deaths reported from each of eleven diseases, in persons under five years of age and in each year of age under five years, together with the total number of deaths from each of these diseases in persons of all ages in the United States during the census year 1860. (Compiled from the Eighth Census of the United States, 1860, Mortality and Miscellaneous Statistics.)

DISEASE.	All Ages.	Under 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5.
Cholera Infantum	4,808	2,959	1,339	352	89	48	4,787
Convulsions	9,077	5,099	1,152	597	306	174	7,328
Croup	15,211	5,409	2,759	2,412	1,815	1,140	13,535
Diarrhœa	7,850	2,690	2,137	843	252	124	6,046
Dysentery	10,468	2,482	2,479	1,326	576	288	7,151
Inflam. of Brain	10,349	2,989	1,786	994	521	367	6,657
Measles	3,899	760	884	646	332	188	2,810
Pneumonia	27,094	5,045	2,624	1,456	760	496	10,381
Scarlet Fever	26,402	2,601	3,443	3,886	3,457	2,757	16,144
Teething	4,909	1,951	2,348	501	42	18	4,860
Whooping-cough	8,408	3,723	2,081	1,066	501	314	7,685

In the study of tables 2, 3 and 4 we are confronted with certain difficulties which it is at present impossible to wholly overcome. More than 17,000 deaths are reported as due to convulsions, and more than 4,000 to teething. How the deaths reported as due to convulsions should be apportioned to the various diseases of which convulsions form a prominent symptom, no one can tell with certainty. In Dresden 281 deaths were reported from July 11 to September 25, 1886, as due to convulsions. Subsequent investigation into the histories of these cases by a competent medical officer showed that primary disease of the nervous system was responsible for only thirty-six of these, while cholera infantum and diarrhœa caused the death of seven-eighths of those reported as dying of convulsions. These figures will probably hold good for the United States, and we are justified, I think, in claiming that more than 90 per cent. of the deaths reported as due to convulsions are really due to digestive disturbances.

TABLE 3.—Exhibiting the number of deaths reported from each of eleven diseases in persons under five years of age, and in each year of age under five, together with the total number of deaths from each of these diseases in persons of all ages in the United States during the census year 1870. (Compiled from the Ninth Census of the United States, 1870, Vital Statistics.)

DISEASES.	All Ages.	Under 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5.
Cholera Infantum	20,255	13,375	4,924	1,188	329	161	19,977
Convulsions	12,751	8,563	1,614	642	329	173	11,321
Croup	10,692	4,855	2,102	1,390	943	560	9,859
Diarrhœa	14,195	4,554	2,833	1,310	485	274	9,456
Dysentery	7,912	1,984	1,698	783	320	219	5,004
Inflam. of Brain	13,701	4,152	2,283	1,189	718	489	8,831
Measles	9,237	1,871	2,222	1,257	728	387	6,465
Pneumonia	40,012	7,252	3,686	1,929	1,046	653	14,566
Scarlet Fever	20,320	2,100	2,967	3,262	2,930	2,296	13,555
Teething	3,247	1,444	1,488	274	28	1	3,235
Whooping-cough	9,008	4,424	2,086	1,063	529	294	8,396

TABLE 4.—Exhibiting, according to the reports (with distinction of sex), the number of deaths in each 1,000, deaths in all ages from each of eleven diseases, in persons under five years of age and in each year of age under five years; together with the total number of deaths from each of these diseases in persons of all ages in the United States during the census year 1880. (Compiled from the Tenth Census of the United States, 1880, Vol. XII, Mortality and Vital Statistics, Part 2.)

DISEASES.		All Ages.	Under 1.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	Under 5.
Cholera infant'm	M.,	13,168	673.99	251.25	58.48	10.57	5.70	1000.00
	F.,	11,815	669.41	254.49	57.12	14.24	4.75	1000.00
Convulsions	M.,	9,491	690.57	122.25	57.95	25.38	16.18	912.33
	F.,	8,353	635.68	120.00	61.62	33.87	15.98	867.15
Croup	M.,	9,753	380.68	173.90	140.70	103.60	75.95	874.82
	F.,	8,213	354.40	171.28	153.71	106.26	77.98	863.61
Diarrhœa	M.,	5,953	397.97	189.36	60.98	21.45	10.14	679.90
	F.,	4,872	420.52	199.83	66.06	21.88	8.26	716.56
Dysentery	M.,	7,013	260.21	228.40	166.03	43.56	23.64	661.84
	F.,	6,414	240.89	202.88	103.71	35.51	21.59	604.57
Inflam. of Brain	M.,	5,869	318.54	172.07	82.28	44.38	31.24	648.51
	F.,	5,034	312.71	175.25	84.94	46.15	38.39	657.45
Measles	M.,	3,980	267.44	208.26	125.91	68.75	41.80	712.16
	F.,	4,092	230.64	193.63	117.40	63.73	41.91	647.30
Pneumonia	M.,	35,493	137.50	73.99	40.36	20.49	13.42	295.75
	F.,	27,560	146.54	81.83	44.24	23.38	15.55	311.53
Scarlet Fever	M.,	8,181	100.83	137.71	161.36	141.14	109.78	650.82
	F.,	8,207	73.36	123.78	145.51	130.74	116.21	589.60
Teething	M.,	2,171	419.74	465.41	95.94	12.45	4.15	997.69
	F.,	2,093	422.29	478.72	83.69	9.09	1.91	995.70
Whooping-cough	M.,	5,133	530.57	230.51	102.36	47.27	26.76	937.49
	F.,	5,931	498.56	224.26	118.43	57.10	32.44	930.90

In studying the diseases given in tables 2, 3 and 4, I shall divide them into three classes. The first class includes cholera infantum, convulsions, diarrhœa, dysentery and teething, diseases which cause more than 50 per cent. of the deaths which occur among children under 5 years of

age. Now, what facts can be ascertained concerning the causation of this class of diseases? We have the following:

1. These diseases are most prevalent among children artificially fed.

Prof. Bölkh reports the following table of 1,000 deaths in Berlin in 1885, of those under 1 year of age:

	Mother's milk.	Wet nurse.	Animal milk.	Milk Foods.
Legitimate	7.4	7.7	42.1	67.7
Illegitimate	11.0	.0	63.2	127.8
Total	7.6	7.4	45.8	74.8

2. These diseases are more prevalent in cities than in country places. In Prussia, during the years 1875–77, the average death-rate from these diseases among those under 1 year of age was for each 1,000, 111.1; in rural districts, 96.5; in cities, 139.7.

3. These diseases are more prevalent in summer than in winter. This statement is graphically illustrated in the following plates, and it is also demonstrated in table 5.

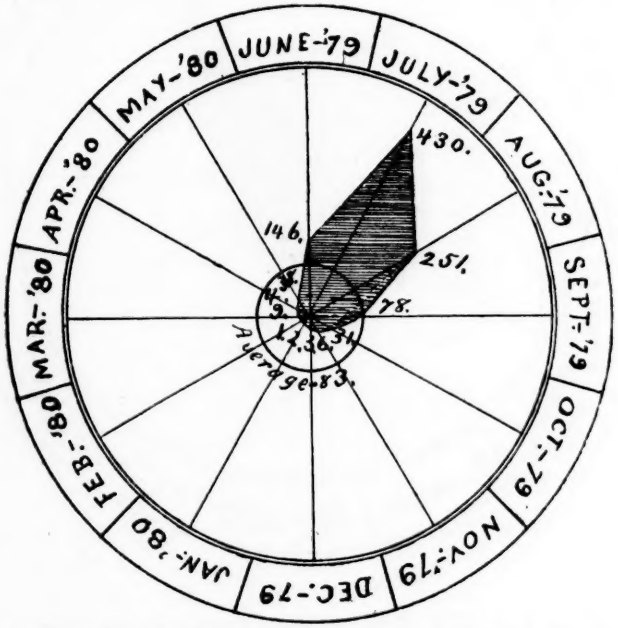
Recognizing the above facts, we must admit that the deaths from this class of diseases will be best restricted by attention to the food of children. Mother's milk is the best food for infants under 1 year, and the principal reason for its being the best is that when taken from the breast of the mother the milk is most likely to be free from germs. City children fare worse than those raised in the country, because when artificially fed the milk is not so fresh, and is likely to be infected with putrefactive microörganisms. These diseases are most prevalent in the summer, because putrefactive germs are more widely distributed at that season than at any other.

TABLE 5.—Exhibiting, by months, the number of (reported) deaths from each of eleven diseases in the United States during the two census years 1860 and 1870. Compiled from the U. S. Census Reports for those years.

DISEASE.	Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Cholera Infantum.	629	611	689	775	1,495	2,314	5,338	6,596	3,745	1,668	616	580
Convulsions	1,848	1,828	2,165	1,952	2,265	1,654	2,037	2,034	1,745	1,485	1,303	1,481
Croup	2,938	2,749	2,799	2,191	2,101	1,188	1,214	1,424	1,860	2,452	2,376	2,546
Diarrhœa	670	613	690	784	1,597	1,868	3,767	4,883	3,643	1,939	891	669
Dysentery	482	454	482	611	1,281	1,385	2,644	4,389	3,563	1,878	658	496
Inflam. of Brain	1,792	1,873	2,221	2,041	2,492	1,756	2,417	2,752	2,472	1,639	1,239	1,330
Measles	846	1,212	1,897	1,973	1,973	1,390	1,136	849	524	425	363	525
Pneumonia	8,401	9,271	10,562	8,311	6,350	3,118	2,281	2,364	2,748	3,375	4,510	5,667
Scarlet Fever	4,928	5,357	5,957	5,213	4,969	2,914	2,611	2,531	2,488	2,701	3,057	3,908
Teething	389	381	472	545	901	748	1,068	1,265	965	643	374	372
Whooping-cough	1,093	1,332	1,190	1,174	1,285	1,348	1,580	1,850	1,644	1,172	852	896
Av. temperature. *	36°	38°	45°	54°	66°	74°	78°	76°	69°	56°	46°	38°

* At six stations in the United States for a series of years.

DEATHS FROM CHOLERA INFANTUM, BY MONTHS, IN 31 REGISTRATION CITIES IN THE U. S.



From Vol. XII, Tenth Census United States, Part 2.

A second class of diseases seriously affecting infantile mortality comprises diphtheria (reported in the United States census as croup), measles, scarlet fever and whooping-cough. These are universally regarded as contagious, and they are to be restricted by isolation and disinfection.

While I have no doubt that a microörganism is concerned in the production of pneumonia, I think that the weight of evidence at present is that exposure to marked changes in external temperature is an important, and probably a necessary factor in the causation of this disease. Deaths from pneumonia may be restricted by avoiding such exposure.

In concluding I may give the following answers to the questions asked in the beginning of this paper:

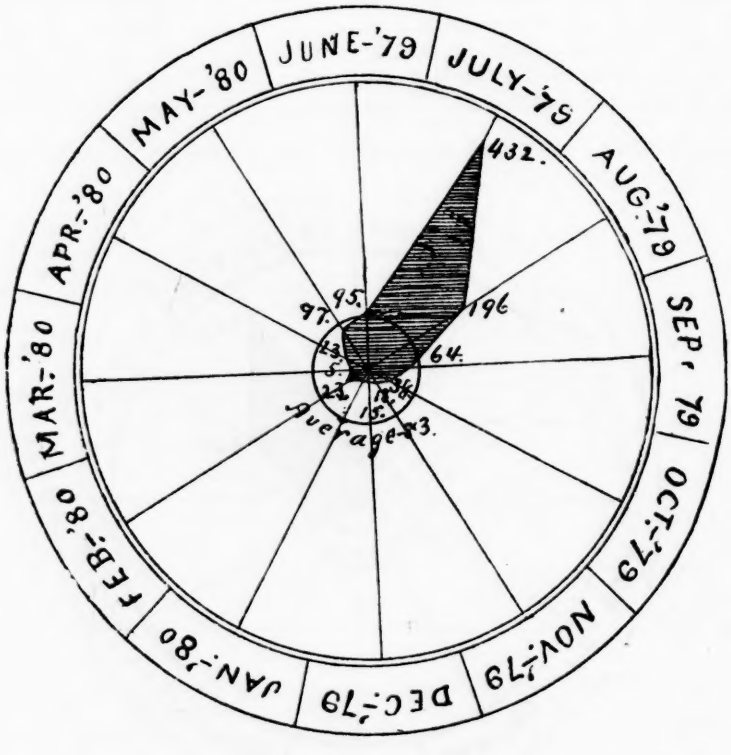
1. One-fourth of the children born in the United States die before they reach the end of the fifth year of life.

2. Derangements of digestion cause more than 50 per cent. of these deaths. This class of diseases may be restricted by proper attention to the food.

3. Infectious diseases are serious in their effects upon infantile mortality. They may be restricted by isolating the sick and disinfecting clothing and rooms.

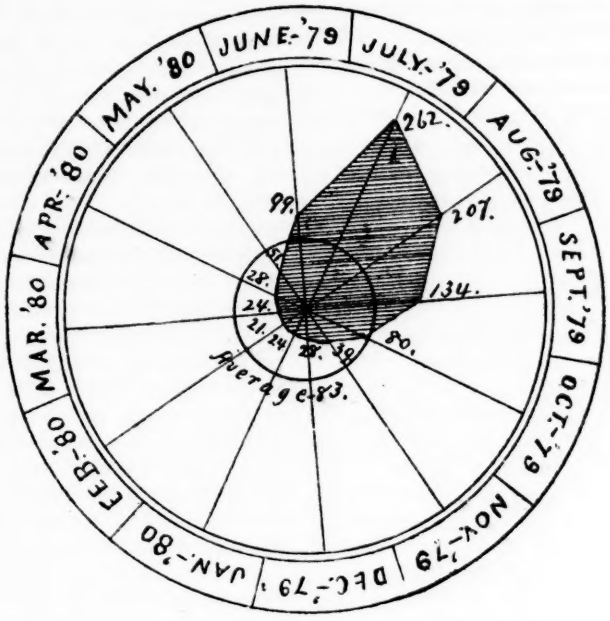
4. About three-eighths of the total deaths from pneumonia occur among those under 5 years of age. Proper clothing and lessened exposure to extremes of temperature will do much to protect against this disease.

DEATHS FROM CHOLERA MORBUS, BY MONTHS, IN 31 REGISTRATION CITIES IN THE U. S.

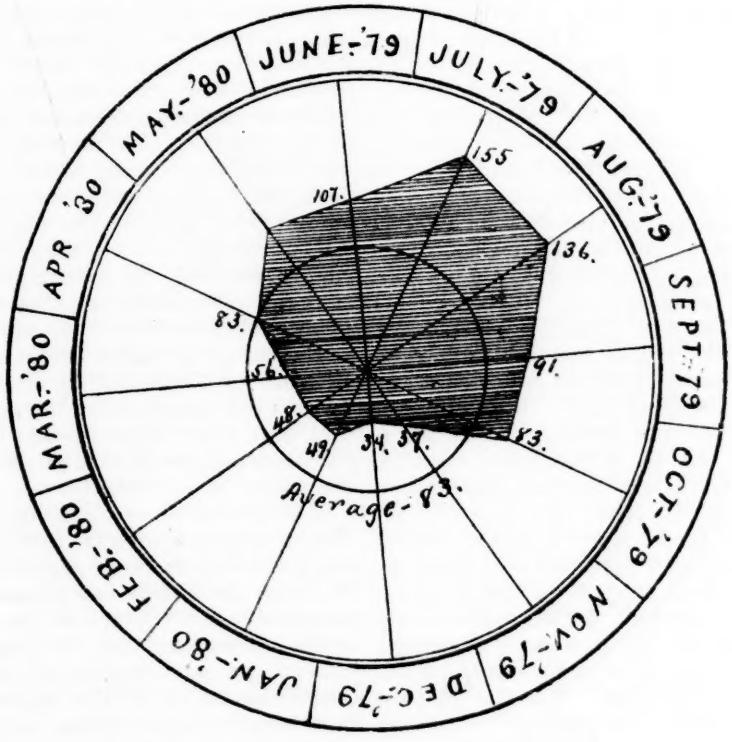


From Vol. XII, Tenth Census United States, Part 2.

DEATHS FROM DIARRHŒA AND DYSENTERY, BY MONTHS, IN 31 REGISTRATION CITIES IN THE UNITED STATES.



DEATHS FROM DENTITION, BY MONTHS, IN 31 REGISTRATION CITIES IN THE UNITED STATES.



From Vol. XII, Tenth Census United States, Part 2.

FOOD IN THE TREATMENT OF PULMONARY CONSUMPTION

Read in the Section of Practice of Medicine, Materia Medica and Physiology, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY SOLOMON SOLIS-COHEN, A.M., M.D.,
OF PHILADELPHIA.
PROFESSOR OF CLINICAL MEDICINE AND APPLIED THERAPEUTICS, PHILADELPHIA POLYCLINIC, ETC.

Rational therapeutics must be based on sound pathology. As an element in such pathology we are justified in considering empirical results of certain plans of treatment, independently of the views which have led to the adoption of that treatment. The scope of this paper is therapeutic, but in order that the objective points of therapy may be clearly set forth, it is necessary briefly to allude to certain moot questions of pathology.

The term pulmonary consumption is used in preference to the term tuberculosis, because the prevailing opinion of the day regards that pathological product called tubercle as the result of the vital activity of the microörganism known as the bacillus tuberculosis of Koch—while the therapeutic method to which attention is invited is not directed against that organism, its activity, or its products; but against the morbid process which permits it to obtain pabulum, and therefore to flourish, within the human body.

Without being hypercritical, it is still necessary to use terms accurately. If by tuberculosis we mean a disease whose natural history is but the history of the growth of a bacillus, and the consequences, direct and indirect, of that growth, then the feeding of patients affected with that disease can have no therapeutic influence upon the tuberculous process; but the feeding of patients affected with consumption has great therapeutic influence upon the consumptive process. It becomes necessary, then, in deference to the received opinion which substitutes bacteriology for morbid physiology, as the fundamental science of pathology, to emphasize the distinction forcibly drawn by Niemeyer when he declared that the great danger of phthisis was tuberculosis. In other words, that condition which is commonly alluded to by writers holding the current view, as a "predisposition," "want of immunity," "lack of resisting power," "presence of culture medium," etc., is, in this paper, regarded as the disease itself—the consumption, the phthisis—against which the efforts of the physician are to be directed; and the bacillary features—the tuberculosis if you will—are regarded as epiphenomena. This view finds support in the pregnant utterance of that philosophic thinker and keen observer, Benjamin Rush, the greatest of American physicians, who, in opposition to the crude pathology of his own day, declared "that the abscess, cough, tubercles, ulcers, and purulent or bloody discharges which occur in the pulmonary consumption are the effects and not the causes of the disease." I do not wish to be understood as subscribing to the pathology of Rush in all its details. In a century we learn something. If future research with better knowledge of physiological chemistry shall indubitably establish the claims now made as to the pathogenetic powers of microörganisms, and of alkaloidal products resulting from their activity, it will become necessary to revise a large portion of our nosology; and particularly in the disease, or rather in the morbid processes, now under consideration, will we have to recognize the existence of several distinct stages, each of which will require for clear understanding a distinctive name. By consumption, then, we mean, not a local disease resulting from the parasitic activity of a microörganism, but with Rush, "a disease of the whole system," an aberration of nutrition, the proximate cause of which is as yet undetermined; the remote causes being heredity, unhygienic life and surroundings, previous debilitating disease, and those influences in general to which we apply the term depressing; and in the pulmonary form of the disease to which attention will now be limited, we find as an additional etiological factor, partly remote, partly proximate (so far as local conditions are concerned), that special form of hygienic error which is expressed by the term improper breathing; whether we refer to the nature of respired substances or to the performance of the act of respiration.

Holding these views as to etiology and pathology, therapeusis becomes at once simplified. We can dismiss from consideration altogether the bacillus and its alkaloids, except as these may give rise to intercurrent symptoms which require special interference, determined by the special nature of the symptoms. The stern logic of experience has abundantly demonstrated, if not the folly, at least the inutility with our present resources, of attempts at specific microbicidal treatment; and the physiological or chemical antidotes to ptomaines can only be determined by the character of their toxic effects. Therefore, as already stated, symptomatic treatment can alone be employed.

But reflection makes evident, and universal experience confirms, that against the disease itself, against the consumption, the malnutrition general and local, direct measures may be employed. And the nature of the morbid process indicates at once the nature of the remedy.

The disease is one of malnutrition, of wasting. The remedy is nutrition, feeding. The result in any particular instance depends upon the extent to which the disease has progressed; the causes, proximate and remote, of the general and local morbid processes; and the degree in which the patient can be removed and protected from the continuous action of the causes. Therefore it is that heredity, from whose influence removal is

[1] An Inquiry into the Cause and Cure of the Pulmonary Consumption. Medical Inquiries and Observations, Phila., 1805, 2d edition, Vol. II, p. 82.

impossible and protection difficult, plays such an important part in increasing the mortality, by diminishing the powers of recovery. Nevertheless, even the dangers arising from heredity can to greater or less extent be overcome by judicious management, and life be saved or greatly prolonged.

We have spoken of the powers of recovery; and this is the keynote of treatment. Many consumptives get well under judicious treatment, and some in spite of injudicious treatment; but we cannot, in a strict use of words, speak of consumption as being cured. The physician helps his patients to recovery. By altering their environment, he puts them into favorable condition for the inherent powers of the organism to restore the equilibrium of vital action which constitutes health. But that is the highest triumph of the healing art. Nature herself becomes art's obedient servant.

In the judicious treatment of cases of pulmonary consumption medicines, so-called, have their appropriate place. Medicinal treatment, however, must be distinctly secondary and tributary to hygienic treatment; and the most important item of hygienic treatment is diet.

Diet in this connection is of two kinds, alimentary and respiratory. Air is food, equally with meat and drink. One is not less important than the other. Proper regulation of both is absolutely necessary. While it has long been recognized that nourishing food is of the greatest necessity in the management of cases of pulmonary consumption, within recent times the experience of Debove has most of all contributed to the proper appreciation of this fact by the profession. It is unnecessary to do more than allude to the reports of this observer upon the value of overfeeding by means of the stomach-tube, for these reports have been abundantly confirmed by subsequent experience of competent observers in all countries.

The great value of Debove's demonstrations, moreover, consists not so much in the method of alimentation employed—for resort to the stomach tube may be reserved for special cases—but in the fact they prominently brought forth, that consumptives, despite loss of appetite, retain good powers of digestion and of assimilation for certain kinds of food; that, indeed, they are able to dispose of a quantity far in excess of the needs of healthy persons; and that by means of this excessive quantity, this superalimentation, not only can present waste be checked, but past waste be repaired. Debove, too, indicated the most serviceable articles of food, namely: beef-powder, eggs and milk; in other words, a highly concentrated nitrogenous dietary.

The results of experience in treatment are surely as fully worthy of confidence as the results of experience in the physiological or pathological laboratory. These results seem to justify the opinion that as in diabetes—a wasting disease whose frequent termination in phthisis justifies the suspicion of a strong kinship between them—there is imperfect metabolism of carbohydrates; so in consumption, there is imperfect metabolism of the same class of food stuffs.

The problems of metabolism in nutrition, are not yet sufficiently clear of solution, to venture any explanation, either of the cause or the exact mechanism, of this failure; but by putting in this form the statement of experience that consumptives, like diabetics, do best on a nitrogenous dietary, we are enabled to make the fact more prominent. Experience also shows that beef is the best form of nitrogenous aliment in these cases. A group of practitioners in New York have had considerable success by restricting their patients to an exclusive diet of beef, combined with copious potations of hot water. This plan, I can personally testify from examination of patients thus treated, does yield excellent results; but I have obtained equally good results in my own practice with a more varied dietary; of which, however, beef forms the principal item. It should be tender and juicy, and the removal of fibrous parts is an advantage. It may be broiled or roasted, but should always be done rare. It may be finely chopped, moulded into little patties and broiled just sufficiently to brown the outside, then seasoned with salt, pepper, thyme, parsley, etc., to taste. It may be eaten raw if desired, and if no apprehension of tænia be entertained; but there is no advantage in raw beef over rare broiled steak or rare roast. Beef should be eaten at least twice, and if possible, three times, a day. When there is danger of the patient tiring of it, mutton, fowl, sweetbreads, eggs, fish or game may be occasionally substituted. Milk should also form an important portion of the dietary. The effort should be made in the majority of cases to have at least a quart and a pint of milk and a pint of cream taken during each twenty-four hours. Kumyss, or some of the other fermented preparations of milk, are often highly useful. Soups, and broths of all kinds, not likely to cause indigestion, and not containing any of the prohibited vegetables, may also be partaken of. The leguminous vegetables, peas, beans and lentils, as well as lettuce, cresses, spinach, and the other green vegetables, which contain those alkaline salts of organic acids so highly necessary to the proper constitution of the blood, should be freely eaten; but potatoes, turnips, beets, and the starchy and sugary vegetables generally, should be avoided, or cut down to the lowest limit. Bread should be reduced to a minimum, and gluten bread or that made from the whole wheat, substituted for the ordinary white bread. Pastries, sweets, and in general, those articles of diet which are indigestible or digestible only with difficulty, must be prohibited.

Although in consumption, as in diabetes and gout, the carbohydrates are not properly assimilated, yet other forms of hydrocarbonaceous food are not only harmless, but are absolutely required. The hydrocarbonaceous residue, which, as Pavy has shown, remains after urea has been separated from the proteids, furnishes this in part. In addition, fats in the form of oil dressing for salads, mutton-fat, beef-fat, and, above all, butter, should be eaten in rather large quantities. The cream already spoken of will also furnish a certain amount of fat. Cod liver oil and oleaginous inunctions may be resorted to when necessary. Alcohol also plays the part of a food, as well as that of a medicine, in this affection, more especially in febrile cases. It is best given with some other food, as milk, cream, eggs, or cod liver oil. In some cases, for prudential reasons, it may be disguised as malt extract, or made into a prescription with glycerine, as advised by Jaccoud. Water should be taken freely, and hot water, a pint or so, an hour before each meal, does certainly help to prepare the mucous membrane of the alimentary canal for the reception and proper disposition of food, as well as assist in passing off through the kidneys the greater amount of certain of the waste products of metabolism consequent upon the character of the diet.

The frequency of taking food should not be left to the whims or discretion of the patient. Everything should be accurately prescribed, not only as to quality and quantity of food, but also as to the exact times of eating. Individualization, in special character of food, and in special time of meals, is as necessary, as individualization in selection and dosage of drugs. Here, however, we can only speak in general terms. Rarely more than three hours, never more than four hours, except during sleep, should elapse between the times of taking food, and not only should a glass of milk, cream, or milk punch be taken just before going to bed, but there should be something of the kind, or perhaps a glass of wine or spirits, with some suitable meat preparation, like liquid peptonoids, by the bedside within easy reach of the patient, in case of waking during the night or early morning

When digestion seems to be impaired, or when a sufficient quantity of ordinary food cannot be taken, or when for any reason it is desired to save for other purposes part of the energy that would be required for digestion, predigested foods may be employed.

The milk used by the patient may be partially peptonized, or the alkaline pancreatic preparation simply be added to it at the moment of drinking, the peptonization being thus artificially effected within the alimentary canal. Peptonized beef tea, a preparation which, unlike ordinary beef tea, is a true food, may be prepared at home, or some of the excellent preparations of predigested beef which are now on sale at the shops, may be obtained. Of these preparations I have derived most satisfaction from the use of Reed & Carnrick's beef peptonoids, of which from one ounce to four or five ounces daily is given, according to indications. It may be made into a paste and spread upon bread, or added to hot water, soup, hot milk, or milk and alcohol. I prefer the latter methods.

We may thus outline an ordinary routine, susceptible of modification with the season and according to individual taste or circumstances. The patient should drink a pint of hot water on awakening in the morning and a little later take a glass of milk punch with a tablespoonful of beef peptonoids. An hour or so after this, follows breakfast; consisting of rare broiled beefsteak, mutton chops, broiled fish, or eggs boiled or poached, with coffee or chocolate if desired, milk, sliced tomatoes or other seasonable vegetable, a moderate amount of bread, with a great deal of butter. If much desired, a dish of gruel or porridge, preferably cracked wheat, may be allowed. Two or three hours later, kumyss, or soup, or broth strengthened with beef peptonoids, milk, butter and bread, celery and a salad of greens, follow. At one or two o'clock a substantial dinner is eaten, of which bouillon, with or without beef peptonoids, is the first item, and rare roast beef the principal dish; the meal consisting in addition, of the allowable vegetables, especially the greens; and when possible a glass of burgundy or other generous red wine or good wine of coca, or even a glass or two of beer, is drunk during the meal. Fruits are the only permissible dessert. Dinner should, in many cases, be preceded by the drinking of hot water, half a pint to a pint, half an hour to an hour before eating. Hot lemonade is sometimes more agreeable. At three or four o'clock comes kumyss, or cream, or milk punch with peptonoids, or malt extract; at six or seven, supper of a character similar to the breakfast; at nine, or at latest ten o'clock, bed time, the patient drinks cream with coca, coca wine, or milk and liquid peptonoids, with or without coca; while coca wine, or milk, or cream, with or without alcohol and peptonoids, is placed within easy reach for use on waking during the night. Cold water may be taken at suitable intervals between meals, never with meals.

While the digestive apparatus is not to be burdened beyond its capacity, the object is distinctly cramming—over-feeding—and when it cannot be properly carried out in some such manner as this the tube of Debove should be used without hesitation. For artificial feeding, peptonized milk, with beef powders, leguminous powders, predigested cereal preparations, or raw eggs, should be employed. Alcohol and the digestive ferments may also be added, when indicated. About

a quart should be introduced into the stomach at each feeding, and not less than two feedings a day be practiced. The patient may also be allowed to eat, or to drink nutritious liquids, in the intervals. When gavage is practiced, it is well to precede it by lavage with alkaline solutions, to which a little chloroform water has been added.

In order to enable the patient to digest and to assimilate this excessive amount of aliment, not only must the alimentary canal and its adnexa, immediate and remote, be put and kept in good condition, but a proper supply of air must be afforded. This we have spoken of as the "respiratory diet." Arbuthnot's characterization of respiration as the "second digestion," cannot be too often quoted. In a few cases of comparatively early date, the institution of appropriate voluntary muscular exercise, both indoors and out of doors, will accomplish all that is necessary in this direction. Sydenham asserted that a journey on horseback is an infallible cure for consumption, and Rush endorses the statement, adding instances also of the well known good effects of out-door life, in military camps, among lumbermen and charcoal burners, on hunting expeditions, etc. But patients who can be advised to undertake these journeys must retain a certain amount of vigor and must be so circumstanced that they can afford to follow the advice. In the vast majority of cases, either on account of the patient's muscular weakness, or of domestic and business ties, precluding absence in camp or on journeys, artificial aids to respiration must be employed at home. The best of these is the inhalation of compressed air after the method of Waldenburg. For use in the physician's office the apparatus of Waldenburg still holds its own, as a convenient and efficient instrument. In order to obtain the greatest benefit possible, however, it is necessary to enable the patient to carry out the treatment in his own home, for bad weather and a score of other causes may interfere with his regular visits to his medical attendant. If I venture to recommend for this purpose instruments of my own device, it is because these are the only available apparatus of which I have knowledge. They are not and will not be patented.

There are two forms of apparatus, applicable to two different classes of patients. First, the combination of a bellows with a small gasometer, or of a doubly acting bellows with a pair of gasometers, made by Metzger, of Philadelphia, and known as the Cohen-Richardson apparatus; and, Second, the little pocket apparatus made for me by Codman & Shurtleff, under the name of the Pneumatic Resistance Valves.

The first of these instruments, described in the *New York Medical Journal*, October 18, 1884, has been in use for more than six years and, with some improvements suggested by experience, has given complete satisfaction. It is simply a cheap and convenient method for administering inhalations of compressed air, or such inhalations combined with expiration into rarefied air.

The second, for use primarily with stronger patients, or secondarily to keep up the good effects obtained by the first method after cessation of active treatment, was described in the *New York Medical Journal* December 6, 1887, and is here exhibited. By interposing into the current of respired air a measured impediment (namely, an ebonite valve controlled by a spiral spring, the tension of which may be regulated by a screw) we are able to offer a definite, regulated resistance either to expiration or inspiration, or to both, as may be desired. We thus obtain the physiological and therapeutical effects of inhalation of rarefied air or of exhalation into compressed air; and the instrument is applicable in all cases where these particular therapeutical expedients are indicated. By combining with a compressed air apparatus an expiration resistance valve, we are enabled to get the effects of continuous respiration of compressed air in the rare cases that this method is of benefit. I have not, however, found either the latter, or expiration into rarefied air, of greater benefit in the dietetic treatment of consumption than the simple inhalation of compressed air, to the very great benefits of which, after this necessary instrumental digression, I now desire to call attention.

The mechanical-physiological principles involved, have been elsewhere fully discussed and need not here detain us. The fundamental law of physics that motion takes place in the direction of least resistance, explains them all. The physiological-therapeutical effects are partly local, partly general. Locally the effects are:

First, restoration of proper expansion of the lungs, whether deficient expansion has resulted simply from debility of the muscular apparatus or loss of tone in the elastic parenchyma, or whether, in addition to these factors, there has been occlusion of bronchioles and alveoli by certain products of congestion and inflammation, still remediable and removable, such as engorgement of vessels, effusion, accumulation of products of abnormal secretion and catarrhal desquamation, and even new formed congeries of immature cells.

Secondly, by reason of increased expansion, a greater amount of air containing necessary oxygen enters the lungs and comes in contact with a greater extent of blood surface, and this under a moderate pressure which, to some extent, facilitates both gaseous exchange and combination of hæmoglobin with oxygen.

Thirdly, by pressure effects upon the heart and vessels, both the volume and activity of intrapulmonary circulation are increased, resulting in

the exposure of a still greater number of corpuscles to the increased volume of oxygen, and in increased nutrition of the pulmonary tissues; and, from similar effects upon peripheral circulation, the ultimate penetration of blood into all the tissues, with tissue respiration, is stimulated and increased. If we add to these demonstrated effects what is theoretically probable, that the production and absorption of lymph and chyle, and the functional activity of the abdominal viscera in general, are increased by the pressure exerted upon them by the diaphragm, we can see what a powerful stimulus, alike to general nutrition and to its individual processes, is afforded by this simple expedient.

Fourthly, pulmonary ventilation is increased. That is to say, not only is a greater amount of oxygen inhaled and absorbed, and a greater amount of carbonic acid given up and exhaled, with each act of respiration; not only does the vivifying current of inspired air finally penetrate into all the disused and clogged recesses; but the foul materials which accumulate in such disused areas are reached and expelled; thus cleansing and purifying the respiratory surfaces and averting the dangers of auto-intoxication from absorption of the products of putrefaction; and also tending to prevent whatever further dangers may be liable to arise from the cultivation upon these products of the bacillus of Koch.

This applies not only to gaseous, but to what may be called circulatory ventilation, and its benefits, especially in the apices in early cases, cannot be overestimated.

Fifthly, the depth and regularity of the respiratory act; the exercise to the muscles of respiration thus afforded; together with the stimulus to and regulation of the action of heart and vessels; produce a general tonic effect upon the nervous and muscular apparatus of respiration and of circulation, and institute an improved habit in the performance of these functions, which tends to maintain and increase all collateral benefits.

Through these local effects, and the general effects already alluded to as obviously resulting, we are enabled to apply with greater efficiency, the measures designed especially to improve general nutrition. For not only do we get rid of a portion of the depressing influences which are factors in the production and maintenance of the disease, but we are enabled to overfeed our patient with a certainty that the food given will be utilized, and that the waste products will be largely burned off, without giving rise to irritating or toxic products of imperfect oxidation. In other words, we stimulate all the processes of metabolism, both constructive and destructive, from the digestive canal onwards, and thus directly improve both organic harmony and cellular nutrition. In addition, we are able, when this measure is indicated, to administer blood-improving remedies, such as iron and arsenic, in greater quantities and with better effect.

It is unnecessary to detail the history of cases treated upon the principle of improving nutrition by proper alimentary and respiratory food, supplemented and aided, of course, by such other treatment, medicinal and hygienic, as general principles and individual conditions may indicate. It does not revive the dead, it does not restore lost tissues; but in no case has it failed to secure to the patient greater comfort and more or less prolongation of life; in early cases it has secured perfect recovery, and even in a few far advanced cases has put the patients into such good nutrition, despite the presence of large pulmonary cavities, that they, if not their physician, have for some years considered that cure was effected. One such case, of recent date, being fresh in memory, I may quote as an illustration: that of a lady aged 28, whose brother and sister had died of pulmonary consumption, whose father and mother had both lost numerous relatives by the same disease. When she came under observation, in September last, she had been sick for two years. There was great consolidation of the upper portion of the right lung, with a large, moist cavity in the middle; and there was some consolidation of the upper half of the upper lobe of the left lung, with an area of softening apparently the size of a silver dollar detectible posteriorly. Cough was troublesome, the sputum being nummular. Indigestion was apparently pronounced. There was an afternoon temperature of 101.5°. The patient was feeble. Her weight was 107 pounds.

Last month she returned to her home weighing 136½ pounds, without fever or cough, with perfect digestion, and feeling strong and vigorous. The cavity in the right lung remains, but is dry. There is no evidence discernible of softening in the left lung. The area of condensation is diminished, leaving on the left about three fingers' breadth of moderate dulness, and on the right about five fingers' breadth of marked dulness, interspersed with some small scattered areas of resonance. I do not look upon this as a complete recovery, but it gives a prospect of years of comfortable life, at home, and not in expatriation, to one who had been told by an eminent authority some months previous to my first acquaintance with her, that her case offered but little hope of improvement.

Since coming to Newport I have received a letter from this patient, stating that in the last month she has gained six pounds additional. She continues to follow the diet advised and to use the compressed air apparatus.

If I may repeat words I have elsewhere used, let me earnestly affirm, in conclusion, that as the ancient orator declared the three essentials of eloquence to be "action, action, and action," so

may the therapeutist of to-day declare the three essentials of the treatment of consumption to be —not microbicide, but—NUTRITION, NUTRITION, and NUTRITION.

EPICYSTIC SURGICAL FISTULA, FOR THE RELIEF OF VESICAL CATARRH.

Read by Title in the Section of Surgery and Anatomy, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY JOHN D. S. DAVIS, M.D.,
OF BIRMINGHAM, ALA.

The treatment of vesical catarrh by suprapubic drainage, irrespective of the causes producing the disease, is not only the most rational, theoretically, but the most available and successful. Such has been the palliative, restorative and curative effect of suprapubic drainage in cases of suppurative cystitis that I have treated by this method, that I have repeatedly resorted to it, with the happiest results.

A close observation of my cases, though at first giving me much anxiety and apprehension, taught me the valued lesson of suprapubic drainage in cystitis. The epicystic fistula gives a desirable continuous drainage, I have not been able to get by any other method. The fistula possesses the ability, through the recti muscles, and a possible pseudo-sphincter, to control the urine at all times. The pseudo-sphincter muscle is formed, no doubt, by the fibres of the detrusor urinæ.

I have tried drainage of the bladder by perineal incision, in the treatment of vesical catarrh; but in no instance did I get such results as in the cases treated by a direct opening into the bladder above the pubis.

September, 1888, I was called by a physician friend, Dr. J. C. Dozier, to see a patient with him. The man, Mr. B., had retention of urine from an impassable stricture of the urethra and enlarged prostate gland. I aspirated his bladder of 2½ pints of alkaline urine, containing pus and mucus. The patient was able to pass a very small stream of urine the next day and would not be operated on for the relief of the stricture. Three months later I was called to see him, and found him suffering from extravasation of urine into the scrotum as the result of an unsuccessful attempt to draw his urine the day previous. The contusion, puncture, etc., resulted in an extensive extravasation into the scrotum, perineum, and above the pubis. I found him with a severe chill, temperature 106°, and pulse 140. I feared extravasation into the peritoneal cavity and suggested to the family the possibility of having to open the peritoneal cavity at once. I, however, resorted to draining the bladder above the pubis. Seven days after the suprapubic puncture I performed internal urethrotomy for relief of penile stricture, and began the treatment of the enlarged prostate by electrolysis. The bladder was irrigated with hot water twice daily for ten days. Electrolysis was used on prostate every third day for ten times, when it was discontinued. The fistula was kept open for thirty days, when it was allowed to close by its own continuity and repair. This was accomplished in about ten days. The man is entirely well and at his business.

Mr. A., æt. 57 years, had been suffering from vesical inflammation for six months. For several weeks before he consulted me he passed his water with much pain. He had rigors and exhaustive night sweats. His temperature would go up for two or three days at a time, and would be followed by two or three consecutive days of only slightly elevated temperature. He had frequent lumbar pains shooting toward the bladder and hip, retraction of right testicle, and tenderness on pressure over the right kidney. Had frequent desire to urinate, with inability to pass his urine. Urethra competent. Prostate gland was slightly enlarged. Urine contained pus and mucus. Average daily amount of urine 39 ozs. After the washing out of the bladder pus would soon accumulate in the viscus, which was conclusive to my mind that pyelitis was causing the progressive emaciation and hectic fever.

Operated for the formation of the direct epicystic fistula for draining bladder and kidney. Bladder was washed out twice daily. Fever subsided on the second day. Patient is entirely relieved from pain; fistula well formed. He returned to his home on the thirtieth day. I hear from him, however, every second day, and he is improving all the time. If the pyelitis had been due to stone in the kidney it would not have disappeared so early. And, too, in such a case the fistula would offer but temporary relief to the bladder only. I am sure he will experience relief so long as he keeps the fistula open and washes out his bladder. By the use of my *epicystic fistula plug*[1] he will have no trouble in keeping the fistula competent. It is possible that he may in one or two years be able to let the fistula close in safety. It should not be allowed to close until every symptom of the disease has disappeared for many months. Specific gravity of urine June 5, 1889 (forty-nine days after operation), 1020, no mucus and no pus.

I was captivated by the enthusiastic reports of Dr. Hunter McGuire,[2] on his coffee-spout fistula for prostatic hypertrophy, and did epicystotomy for the formation of his coffee-spout fistula. Two cases have been reported,[3] with no better results

[1] The author's *epicystic fistula plug* is made to fill the fistula within one-third of an inch of viscus. The plug (which was first suggested to the author by his brother, Dr. W. E. B. Davis), is made of silver or vulcanized rubber and provided with a slight shoulder one-fourth of an inch from concavo-convex flange, which is grasped by the skin and held in position. Without the shoulder the recti muscles throw the plug out and prevent its retention.

[2] Virginia Med. Monthly, October, 1888, pp. 445-456.

[3] Virginia Med. Monthly, April, 1889, pp. 1-5; Alabama Med. and Surg. Age, April, 1889, pp. 192-198; New York Med. Journal, April 13, 1889, pp. 416, 417.

than have attended the direct suprapubic fistula. I adopted the coffee-spout fistula with the view of practicing it, but I am so thoroughly convinced that it does not possess the advantages attending the direct fistula, that I do not think I will ever resort to it again.

In prostatic hypertrophy, where there is much distension of the bladder, due to retention of urine, and the bladder is prominent above the pubes, a sufficient opening can be made, by a single plunge of a large trocar or knife, for cystoscopic exploration and the formation of the fistula for intra-vesical treatment and drainage. If nothing more than drainage is necessary, the dread and shock of a technical epicystotomy (by a long incision) may be avoided, by giving the patient the benefit of a fistula in the manner suggested. I have resorted to this measure in cases of very old and feeble men, where I could not administer an anæsthetic, with immediate relief to the patient. In conditions of the bladder where, by reason of a long-standing inflammation of the bladder, the viscus becomes contracted, it is necessary to make an incision through the integument, superficial fascia, muscles and transversalis fascia, sufficiently large to allow the bladder to be opened for intra-vesical ocular exploration and operation.

The technique of the operation for the formation of the epicystic fistula, described in my recent paper[4] before the State Medical Association of Alabama, and published in many of the leading journals of this country, was the result of my enthusiasm over the coffee-spout fistula. My experience with the formation of the direct and coffee-spout fistulæ has taught me that the former is always practicable, as it can be quickly made in cases where an anæsthetic cannot be given with safety, and possesses every advantage attributed to the coffee-spout fistula, and is superior to it in the power to retain and expel the urine, by reason of a better power exerted through the recti muscles near the symphysis.

Hence I consider it necessary to retrace my steps for the better consideration of the direct epicystic fistula, which I have formed for exploration, intra-vesical treatment and drainage, and reconsider it under the following heads:

I. Definition of epicystic surgical fistula.

II. Surgical resources in the formation of the epicystic surgical fistula.

1. Preparation for the operation.
2. Anæsthesia.
3. Position.
4. Incision and opening bladder.
5. Intra-vesical exploration and treatment.
6. Toilet and after-treatment.

III. Advantages of the epicystic surgical fistula.

1. Cystoscopic exploration.
2. Intra-vesical treatment.
3. Drainage.

1. *Definition of Epicystic Surgical Fistula.*—Epicystic surgical fistula is the title here given to a suprapubic fistula into the bladder, created by the surgeon for exploration, intra-vesical treatment and drainage. A fistula which, acting as an artificial urethra, is capable of giving free access to the inside of the bladder for cystoscopic exploration, to provide a ready, convenient and comfortable means of emptying the bladder at will; gives the surgeon a competent opening into the viscus for exploration of ureters; intra-vesical applications; drainage in pyelitis and in pyelonephritis.

It constitutes an essential element in the speedy and complete evacuation of the contents of the bladder in all epicystic operations, and imitates nature in the restoratton of its own continuity and repair as the pathological changes within the bladder subside.

II. Surgical resources in the formation of the epicystic surgical fistula.

1. *Preparation for the Operation.*—All hair is to be shaved from the pubes, and all the details of antiseptic surgery are to be carried out so far as cleaning the pubes and abdomen.

Except in those cases of hypertrophy of the prostate gland; paresis and atony; neurosis of the bladder, and in all forms of bladder inflammation accompanied with distension of the bladder into prominence above the symphysis, where immediate epicystotomy, by puncture with a trocar or knife, is necessary, two assistants, though not necessary, may be of valuable aid.

A temperature of 80° or 85° F. should be maintained in the operating-room from the beginning to the end of the operation. The bladder is emptied and thoroughly washed with warm water. When the water returns clean, the bladder is slowly distended with warm sterilized water, thrown in by means of a fountain syringe, with nozzle in urethra—with a degree of pressure sufficient to distend the bladder to its utmost capacity—which can never be too great for the resistance of the bladder. It is better to fail in filling the bladder than to distend the bladder beyond the limit of competency. Indeed, it is not necessary to fill the bladder to any degree of resistance. I have operated when the bladder was in an irritable condition and would not tolerate distension greater than the capacity of 2 ozs., and had no difficulty in avoiding the pre-vesical fold of peritoneum or finding the bladder. The water is secured in the bladder by tying the penis at the base with a rubber tube.

4 "Epicystic Surgical Fistula for Cystoscopic Exploration, Intra-vesical Treatment and Drainage," by John D. S. Davis, M.D., April, 1889. Transactions of the State Med. Assoc. of Alabama, 1889; St. Louis Med. Review, May 4 and 18, 1889; THE JOURNAL OF THE AM. MED. ASSOC., May 18, 1889, pp. 685-703; Ala. Med. and Surg. Age, May, 1889, pp. 247-256; Virginia Med. Monthly, May, 1889, pp. 147, 148; Atlanta Med. and Surg. Jour., June, 1889, pp. 204-212; The Amer. Prac. and News, May 11, 1889, pp. 294-298; Times and Register, May 11, 1889, pp. 27-29; Cincinnati Med. News, April, 1889, pp. 217-224; N. Y. Med. Times June, 1889, pp. 87, 88.

A colpeurynter is next to be well oiled and inserted into the rectum—the rectum having been previously emptied by enema—and filled with warm water. This distension brings the bladder into view above the pubis.

2. *Anæsthesia.*—My preference for chloroform is the result of personal experience with it. It is not free from objection, as its depressing effect on the heart is well known. The operation usually occupies from five to ten minutes; and hence its prolonged use would be unnecessary and uncalled for. The objections to ether are the suppression of the excretions, and the frequency with which bronchitis is produced when administered to persons advanced in years. The best course to pursue, when the operation is prolonged, is to follow the use of chloroform by ether.

In old men where there is much distension from retention of urine, due to hypertrophy of prostate, to avoid the dangers of an anæsthetic, I make the fistula by one plunge with a large trocar or with a knife, the shock never being noticeable.

If the operation requires the administration of an anæsthetic, the patient must be kept profoundly under its influence from the first incision until the superficial wound is closed.

Position.—The patient is placed on the back on an ordinary operating table with the legs extended, as if in a position of perfect comfort and rest. Many surgeons claim advantages in the position recommended by Trendelenburg. Eigenbrodt emphasizes the fact[5] that the elevation of the pelvis in Trendelenburg's position[6] helps the surgeon to avoid the prevesical peritoneal fold at the time of the incision of the bladder.

It possesses no advantage over the ordinary flat-back position. With two openings in the bladder for a continuous stream of clear water, every part of the bladder may be illuminated with the electric surgical light, and thus the surgeon is enabled to examine the entire intra-vesical wall. Undoubtedly the position recommended by Trendelenburg possesses advantages which to the author, more than to myself, make it highly ideal. As for myself, I prefer and recommend the flat-back position.

4. *Incision and opening Bladder.*—I have three methods for making the incision, viz.:

a. When the distension is great and no intra-vesical operation necessary, the opening is made with a trocar, withdrawing the stylet and replacing it with a rubber catheter, after the introduction of which the canula is withdrawn, leaving the catheter in the bladder. It is necessary, sometimes, to enlarge the external or cutaneous opening to prevent a closure of the catheter by compression and to render the external opening sufficiently large.

b. The bladder may be opened, when distended, by a direct incision with the knife, in the median line, with cutting edge towards the symphysis pubes. The knife is withdrawn and a catheter is introduced, through the wound, into the bladder.

c. A perpendicular incision, 1 or 2 inches, is made in the median line above the symphysis pubes. The recti muscles are separated to symphysis. If the pyramidalis muscles are in the way, the fibres should be cut. The transversalis fascia is divided on a grooved director from symphysis to upper margin of superficial wound. Instead of following Guyon's manœuvre, I catch the bladder with a tenaculum on a line with the symphysis, through the prevesical fat, and cut through with a bladder knife into the bladder with one smooth, clean incision, to prevent undue disturbance of the cellulo-adipose tissue between the bladder and pubes, and avoid infiltration. I have never seen a case where it was necessary to put up the prevesical fat, and with it the peritoneal cul-de-sac. If the bladder is caught on a line with the symphysis and cut downwards, no fears need be had for the peritoneum. Cutting this prevesical fat prevents its after dropping down over the opening into the bladder, and acting as a valve to prevent easy escape of urine and causing infiltration. And, too, such a procedure gives a smooth incision throughout, and it is almost impossible to have infiltration, even when no drainage tube is left in the bladder, and the urine is left to flow out through the fistulous track and taken up by a layer of absorbent cotton. In making the incision into the bladder, little attention is to be paid to any vein or veins which are sometimes met with. If cut, they will stop bleeding when the bladder is dropped back and the rectal bag removed. The operation is usually bloodless in the sense of hæmorrhage. I have operated without the patient losing more than 1 drachm of blood.

5. *Intra-vesical Exploration and Treatment.*—With the provisions of the puncture or incision the bladder can be examined with the cystoscope and surgeon's light. If tumors be found, if practicable they should be removed; villous growths and any foreign body found should be removed. If nothing is found in the bladder, the fistula, in the absence of malignancy, will be all that is required to remove the cystitis.

Under the provision of the last incision, the finger is carried into the bladder and a thorough search made for any tumors, villous growths, or foreign bodies which should be removed. The rubber around the penis is now untied and the bladder emptied and washed out with hot sterilized water.

6. *Toilette and After Treatment.*—Under the provisions of the last method of making the incision, the bladder is now allowed to drop back into the pelvis, and the superficial wound so

[5] L. c., p. 72. Cf. Lang, Med. News, December 4, 1886.

[6] In Trendelenburg's position the patient's legs are held over the shoulders of an assistant with the body resting on an incline table, much in the position in which hogs are hung for spaying.

closed by two or more sutures (including the skin and superficial fascia only), in the upper portion of the incision, as to leave a fistulous track of equal size from the bladder to lower portion of the superficial incision.

A large rubber catheter is now to be introduced into the bladder through the opening, and its distal extremity allowed to enter a urinal placed in the bed between the patient's thighs, or preferably at the patient's side. Prof. F. Trendelenburg, director of the surgical clinic of the University of Bonn, proposed, for draining the bladder in supra-pubic lithotomy, the T tube in latero-abdominal position and open wound treatment as the simplest, safest and best. He makes an antiseptic dressing of iodoform gauze around the T tube. There can be no real necessity for a tube of any kind to be introduced into the bladder for the purpose of conveying the urine from the bladder to prevent infiltration, except in the puncture operation, when it is necessary to let the catheter or canula remain in for a period of six or eight hours, for the formation of the fistula. The smallness of the fistula might be a cause for extravasation, though quite improbable. To prevent irritation of the skin, the urine is kept acid by the administration of citric acid or some other more palatable acid drink. No better antiseptic than the acid urine can be secured for the constant bath of the parts. It should be allowed to flow out through the wound and absorbed by a pad of absorbent cotton placed loosely over the wound, and removed as often as soiled by the outflowing urine. By this method of emptying the bladder, no possible small amount of urine can be impeded in its outflow, which is the case around and outside of the tube when catheter or tube is left in for any length of time—a source of no little annoyance at times. This little collected or retained urine, around the outside of the tube alone, I have seen produce a hard chill and elevation of temperature, and become for the time an immediate, alarming and aggravative source of trouble. I never have seen the skin made sore or chafed by the outflowing urine in epicystotomy, or from its after escape through the surgical fistula.

The bladder should be washed out twice daily with hot sterilized water, by means of a fountain syringe, with its nozzle introduced into the urethra, the water escaping through the epicystic fistula and guided into a bed pan under the patient.

The superficial stitches are taken out at the end of one week, and intermittent catheterization by the fistula is then resorted to, for the sole purpose of training the fistula and to prevent its rapid closure. It is not necessary to catheterize for the purpose solely of drawing off the urine. In some cases I never drew the urine save for the purpose of analysis, but occasionally introduced a rubber bougie or fistula plug to prevent the closure of the fistula. The drainage by the fistula alone is admirable, and the fistula will be well formed in twenty or thirty days, competent to retain urine without dripping and to allow its escape in a good projecting stream at will. With no tearing of the tissues, and with a clean cut, the drainage is perfect and the dangers are *nil*.

III. Advantages of the epicystic surgical fistula.

1. *Cystoscopic Exploration.*—One of the great difficulties in the cystoscopic exploration of the bladder is the presence of pus, mucus and sometimes blood, which renders it exceedingly difficult to maintain a translucency of the fluid used to distend the bladder. By means of a simple fountain syringe a constant current of clear water may be kept within the bladder, so essential to a complete observation of the trigonum Lieutaudii, the most interesting part of the viscus, the ureters, and to examine any affection of that viscus. The fistula may be made for temporary purposes of cystoscopy. Diagnostic purposes are met by the possibility of immediate detection of all local conditions, such as tumors, calculi, foreign bodies, neoplasms, the collection of fluids from the ureters, etc.

2. *Intra-vesical Treatment.*—Having, by means of the epicystic exploration, revealed the true nature of the intra-vesical trouble, the treatment resolves itself into the immediate necessities of the case. For instance, prostatectomy may be necessary; villous papilloma may be found, and should be remedied; pedunculated growths may be found, which should be removed by the scissors, or Paquelin's cautery, etc. In such cases the opening in the bladder sufficient to introduce a finger, should be enlarged downwards under the symphysis pubes, and the operation indicated should at once be performed. The object of the formation of the permanent surgical fistula is to meet the after indications in such operations, the details of which do not properly come within the province of this discussion. However, it is sufficient to state, what is reasonable and practicable, that a better means by which the intra-vesical wall can be reached and treated therapeutically has not yet been devised.

3. *Drainage.*—Permanent after-drainage in all intra-vesical operations cannot be necessary, but it is highly essential to secure good and sufficient drainage until the paravascular tissue is disengorged, the cystitis is relieved and the urine becomes normal and passes per urethra unobstructed. And until this end is obtained, complete artificial arrangement for the escape of the contents of the viscus must be made. In such cases of prostatic hypertrophy or malignant growths, when removal of the obstruction is impossible or contraindicated, the epicystic surgical fistula is clearly indicated and essentially neces-

sary. It meets every possible indication for local treatment and gives the only controllable ready and free drainage to viscus and kidneys. Urinary back pressure, as the result of incompetency of the urethra from the various immovable prostatic troubles, is often an immediate and remote cause of surgical kidney, which can only be removed or relieved by supra-pubic drainage.

It is also indicated in conditions of the bladder of long standing cystitis, where capillary stasis attending the inflammatory process results in paresis. When the urethra is competent, the supra-pubic fistula affords the best means of washing out the bladder in chronic cystitis.

The operation has been performed when the urethra would admit a number 30 (A) sound, simply for the purpose of washing the bladder without the necessity of introducing a catheter twice a day, which causes great irritation in these cases. As stated, with the fistula it is only necessary to introduce the nozzle of a fountain syringe into the urethra, when the water will pass into the bladder and out at the fistula, without irritation to the prostate and bladder, and always with great relief to the patient. The bladder can be washed for hours at a time, when the patient is suffering, with complete relief from all pain.

SCARLET FEVER.

Read in the Section of Diseases of Children at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY C. R. EARLEY, M.D.,
OF RIDGEWAY, PA.

A genus of disease in the class Pyrexia, and order Exanthemata of Cullen. It is an eruptive fever particularly affecting the skin and mucous membranes of the mouth and fauces, and by a majority of writers on the subject is considered as a contagious disease. This I look upon as very doubtful, or at least it has not proved the fact to me in my practice for the last forty-four years. I have known one or more of the same family to have well marked cases of the disease, while others were entirely exempt, and while some families in the locality were every day exposed to it and escaped an attack, other families that prevented their members from going amongst it, when the disease prevailed, or having any communication with those that were sick of scarlet fever, were subject to the disease in all its forms.

The only case I ever saw in which contagion was suggested to my mind was that of a family of four, a man, his wife, and two daughters, residing on a farm about eighty miles north of our town. On the 13th day of January, 1869, he packed his household goods in a two-horse sled and moved for Earley, Elk County, Pa., arriving there on the evening of January 14, 1869. On their way, on the last day, his wife and oldest daughter were taken sick, and on their arrival that evening I was consulted and found them both very ill of scarlatina anginosa. They had moved their family and household goods into a house with a family residing in that town. A few days later his other and youngest daughter was attacked with the same form of disease, and a few days later three children of the family where they were staying were also attacked, two with the same form of scarlatina, and the third case was very severely seized with scarlatina maligna. I at once ordered all clothing and household goods removed to a large farm barn and placed on a scaffold over the threshing floor, consisting of round poles which admitted of free airing, and here every means was used to disinfect all goods and clothing. The house where they were staying was also disinfected, and the patients freely bathed and quicklime placed plentifully in every room. All the cases at once began to improve and were soon well, and not another case was produced in that place. There was no case in the old home from which they had come, before or after their removal. I of course placed this series of cases side by side with the reports of Dr. Rush and others on like cases of yellow fever.

The disease was produced in that family by the condition of the clothing and household goods, that had been stored away in an old, damp and unused room in the house they moved from, where they were shut up from air or light and were filled with mould and dust, and the whole mass of mould, dampness and other filth was packed into boxes and opened upon their arrival in Pennsylvania. Thus those that took them from the boxes in the room at the old home and packed them in the boxes were taken sick with scarlet fever, and all that assisted or looked over the unpacking of the same on their arrival in Elk County, Pa., were also seized with the same disease, and after all these goods were removed to the barn and thoroughly disinfected, not another case existed or was produced, and those that were sick at once recovered; thus showing the cause to be from the condition of the goods unpacked and brought with them and again unpacked without cleansing freely, airing and disinfecting.

In my entire practice I have never known any outbreak of scarlet fever to be produced by any other than local causes. In the country, where the epidemic breaks out in localities where there are no communications with the outside country, where no person has been from home and returned, and no one from other towns and localities has visited, we have in such cases, in my opinion, positive proof that the disease is produced by local causes, especially when, as has always been the case in my practice in the country and small towns and among farmers, lumber camps, mining towns, etc.; at elevations from 750 to 2,350 feet above

ocean level, many of the lumber camps being from three to ten miles from any other settlement or towns, the epidemic has been entirely wiped out on thoroughly cleansing, purifying and disinfecting all the surroundings of the house, clothing and all household goods, having all vegetables, fruits, wood, boxes, etc., removed from the cellars; the walls and floor above well whitewashed with good fresh lime and quicklime placed through the cellar and there left to air slack, and quicklime placed in every room and closet of the house and there left to air slack, and lime thrown in all low or moist places about the building outside; also the sulphate of iron in a solution of about 1 lb. to 4 gallons of water used freely in all water closets, sinks, sewers, etc., as a disinfectant.

Medical writers generally divide scarlet fever into four forms: scarlatina simplex, scarlatina sine exanthemata, scarlatina anginosa and scarlatina maligna. I shall, however, consider these all under one general head, as they appear to be different degrees of the same disease, varying in violence as they occur in different individuals, even simultaneously in the same family. I have frequently seen all the forms of this disease at the same time in the same family of several children, probably owing to some peculiar state of the system.

Symptoms.—Scarlet fever generally comes on with the ordinary preliminary of languor, weariness, rigor and pains in the back and limbs. The fever sets in with a frequent pulse, hot, dry skin, flushed face, furred tongue, anorexia, thirst and muscular prostration.

Sometimes there are nausea and vomiting; sometimes headache or other symptoms of disorder of the nervous system, such as restlessness, delirium, stupor, coma or convulsions; sometimes the patient may appear as well as usual one moment, and the next be seized with vomiting with all the symptoms of the primary attack of the disease in the most aggravated form. In fact, the symptoms of this fever are found of every possible grade from the mildest form, scarcely amounting to disease, up to the highest point of violence and danger. Sometimes at the very first and sometimes at a later period, there is more or less irritation or inflammation of the fauces, which have a red appearance and are frequently swollen.

The tongue is coated with a white or yellowish white fur and bright or scarlet red papillæ appear through the surface or coating of the furred tongue, and it is red at the tip and edges (not so in diphtheria). Upon the second, third or fourth day in most cases a rash makes its appearance; sometimes earlier and sometimes later, and not unfrequently there is no rash at all. In such cases we call it scarlatina sine exanthemata. We frequently find the disease in the latter form in families where other members pass regularly through the disease with rash, etc. The rash appears usually first upon the neck, face and breast; then it gradually spreads over the trunk and extremities, but greater diversity exists in different cases in the amount and the arrangement of the eruption; it is sometimes scanty, presenting but a few points here and there, but more frequently it covers the whole body, varying in its color according to the grade of fever present. The eruption is sometimes rough, but generally smooth to the fingers.

The skin is often slightly swollen on the face, hands and feet. The fever continues through the whole course with various degrees of violence. The pulse is usually frequent. I have often seen it varying from 100 to 130 in a minute; it, however, seldom has much force. The skin is dry, very hot and burning.

The bowels are frequently constipated, and again there is more or less diarrhœa from the beginning, and frequently in the advanced stage. The affection of the throat is often slight, and again it becomes the most prominent dangerous symptom. The tonsil and soft palate or uvula are found to be swollen and of a deep red color, and patches of concrete exudations are frequently seen upon the tonsils at an early period. This condition of the throat, tonsils, etc., should in my opinion be treated as diphtheria. The patient can hardly swallow the food and drink, which is sometimes returned from the nostrils; sometimes the condition of the throat is such as to impede respiration more or less. There is always more or less swelling of the external parts in the region of the submaxillary and parotid glands. It appears to be seated more in the cellular tissue, or the lymphatic glands, than either the parotid or submaxillary. Frequently the mucous membrane of the nostrils is swollen so as to nearly close the nasal passage, and in advanced stages of the disease there is an offensive yellow liquid discharged from the nostrils. There is usually a discharge of mucus, etc., from the mouth and fauces, which in advanced cases becomes quite viscid.

The entire duration of the disease is various, terminating by desquamation taking place; sometimes on the fifth day, sometimes the ninth day, and frequently at a much later period.

Prognosis.—The prognosis in this fever is always uncertain. I have frequently known the mildest cases to assume a dangerously malignant character and the patient die very suddenly. We can never consider our patients out of danger as long as there is any appearance of the disease, or the patient is yet debilitated. In my practice in this country in the year 1859, out of over 400 cases only four died in the active stage of this fever, yet six died after they were discharged from treatment and the parents cautioned as to their care, etc. Some died after days and even weeks of treatment, and others were dead before medical treatment could be procured, and many

others recovered after a long and severe illness.

Some constitutions appear to be proper subjects for the most violent and fatal forms of scarlatina. I have known many of the same family to die of this fever. One family in Jefferson County, Pa., is reported as having lost eight members of the family of ten children in the month of January, 1860, from scarlatina. Of the particular circumstances of these cases I have not been informed. I think this family might have had diphtheria and not scarlatina. I think, upon the whole, we may be safe in all cases to pronounce it very dangerous, let the case be ever so slight. I have known cases where the parents hardly knew that the children were sick until the sequel of anasarca was observed.

Sequelæ.—Scarlet fever frequently leaves a train of difficulties behind it that are very troublesome. The most common of these affections are anasarca, disease of the eye, bronchitis, enteritis, tonsillitis and abscesses of the submaxillary and parotid glands, etc.; also post-nasal catarrh and granulations of the fauces.

I have found many cases where the patient has been nearly deaf, and others nearly blind also with eruptions over the face, surrounding the nose, eyes, chin and nearly the whole face, caused entirely by the condition in which the throat, tonsils, fauces and post-nasal mucous membranes had been left after scarlatina. Patients who have been treated for a long time, from six months to two years, by specialists for loss of eyesight and partial deafness, and others for these eruptions of the face, etc., and all without effect, have called upon me for treatment, and in every case I could find no disease of the eye, ear or face, but the cases dated from the time of having the scarlet fever or diphtheria and had often existed for years. The kind of trouble in each case was owing to the special location of the irritation of the throat, fauces, larynx or post-nasal regions, and in every case, after full and thorough treatment of these troubles, the patient recovered and the irritation did not return, and this too without the least attention being paid to the eye, ear or face.

In fact these were nearly all the cases I had any trouble with in my practice in the year 1859 in this country in the treatment of over four hundred cases of scarlet fever; as before stated, only four died with the disease, while six died of sequelæ. I will not consider this part of the disease further. Frequently in post-mortem examinations of those who have died of scarlet fever, there can be found but slight morbid appearances, not sufficient to account for the fatal termination of the disease. In many cases where the inflammation and irritation of the throat have appeared to be most severe and distressing during life, the examinations have shown but slight traces.

In the summer of 1829 scarlet fever raged in an epidemic form in the place where I was raised. Every child in the place had the disease. Dr. Lorenzo Dany was the physician who treated all these cases, and my first year's practice of medicine was in the town where the old doctor resided and had retired from practice. He often sat in our office and gave his very interesting experience, and, referring to that scourge of scarlet fever, said that was where he did his last bleeding in scarlet fever, and gave two boys of that town the credit of teaching him better than to bleed in that epidemic. These two boys fought so hard, kicking, striking and screaming, that he could not bleed either of them. Yet, while they were as sick as the worst cases, they both recovered and every case that was bled died, and from that time he never used the lancet.

A cathartic of calomel is recommended by some, and this is objectionable also, as it tends to prostrate the general system too much. I seldom give much in the way of cathartics, as there is so much liability to diarrhœa in the latter part of the disease; and when it is necessary to give laxatives in this fever, the mildest should be resorted to, such as minute doses of castor oil or magnesia. Small doses of ipecac may be given *pro re nata*, but not so large as to nauseate. This may be combined with bicarbonate of soda or creta præparata, as the case may require. Some recommend the use of veratum viride in the stage of excitement, but I have never used it; neither would I permit it in any form or in any of the stages of the disease, and I most emphatically denounce its use. There are found occasionally dark colored exudations covering a dark red or livid membrane, but seldom ulcerations. These last cases may have really been diphtheria, yet we have never seen any of these cases. Concrete exudations are often seen, sometimes extending through the pharynx, even to the œsophagus, but not often into the larynx. These exudations look very much as though they might be considered diphtheria. Various internal organs are more or less congested.

The alimentary mucous membrane often shows signs of inflammation. The appearance is different in different cases. A more thorough investigation is necessary and, it is hoped, will be made. There is no doubt that many cases reported to be scarlet fever were really diphtheria.

Cause.—Writers differ in many respects in regard to the cause of the disease; in fact all are in doubt, and I think further investigation is necessary before we can remove these doubts; therefore, I will say nothing further on the subject.

Treatment.—As to the treatment of this fever, there is as much diversity of opinion as in other things connected with it, and in many cases I think this difference is owing to the locality and season, as the disease appears in varied forms in different seasons and different localities.

In mild cases little or no treatment is required.

The bowels should be looked to and the body sponged with cold water if the surface is hot, and cooling drinks also given. In most cases, however, there should be an emetic of ipecac given in the first stage of the disease, but it should be given with caution. Many recommend bloodletting, but I am decidedly of the opinion that the practice is a bad one; yet, I have never used it in a single case, and in all cases where I have known it to be used it has had a tendency to evil rather than good.

Digitalis is also used and very highly recommended by some. I have used it in but few cases and can not speak from experience, but have no doubt that it would be of great use in some cases; but it should be employed with great care on account of its liability to accumulate in the system, and it should not be used in any case where the action of the heart is weak, or at any other time than in the first stage, or while the pulse is very frequent. The chlorate of potash is much used, and it is a very valuable remedy in these cases in most all the stages, or at least as soon as the excitement is allayed a little. A solution of chlorate of potash, chloride of sodium and bicarbonate of soda should be used freely; oil of turpentine may also be given, and sulphate of quinia may be freely administered in cases inclining to debility. I have frequently given quinia in form of solution with asafœtida and aqua cinnamomi in cases of debility, and always give carbonate of ammonia and also brandy or whiskey in cases of much nervous irritability and debility. The patient should be allowed the free use of cold water and to hold ice in the mouth, if there is much heat and thirst.

Local treatment.—In slight cases a gargle of sage tea, honey or sage tea, and borate of soda is all that may be required; but in a case of any importance a preparation of capsicum, chlorate of potash and chloride of sodium with vinegar and water may be used as a gargle, or the powdered pepper mixed in water or vinegar and put on a sponge or camel's hair pencil and applied to the throat; a solution of zinci sulphas may be used. I have used the myrrh gargle with the best effect. A solution of creosote I have sometimes used with good results, but the very best gargle is chlorate of potash, chloride of sodium, gum acacia and the bicarbonate of soda. When the mouth, tonsils and pharynx are greatly irritated, inflamed or ulcerated, and to prevent the possibility of gangrene, nothing has ever proved as useful in my practice as the use of a mixture of ergotine with camphorated tincture of iodine and glycerine.

℞. Ergotine, 4 scruples; saturated tincture of iodine and saturated with gum camphor, one-half ounce; glycerine, 4 ounces. Use with brush freely *pro re nata*. This preparation can be used locally in nearly any stage of the disease.

A good test of the full course of treatment given above was clearly shown in the spring of 1853, while I was from home some time resting and treating myself for chronic bronchitis. A very severe epidemic of scarlet fever broke out in Kearsey, Caledonia and Weadville, Elk county, Pa., and nearly every case proved fatal. I was sent for to return at once, which I did, and took charge of all the cases. I at once put all the houses and all the surroundings in proper order, disinfected all the houses, clothing and bedding, removed all the surplus clothing, bedding, beds, etc., and had them disinfected and stored for a time out of the houses, and whitewashed all cellars, all outbuildings, fences, etc., also scattered quicklime over the cellar bottoms, and placed a good supply of lime in boxes in every room to air slack, and used the treatment referred to above, as each case indicated. The result was, every patient then sick recovered and no other cases appeared, only in a very slight form. All of which is respectfully submitted.

THE CLINIC.

REGULAR THROAT CLINIC AT CHICAGO MEDICAL COLLEGE, NOV. 30, 1889.

BY W. E. CASSELBERRY, M.D.,
PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, AND OF LARYNGOLOGY AND RHINOLOGY.

[Reported for THE JOURNAL.]

TERTIARY SYPHILIS OF THE PHARYNX—OPERATIONS FOR NASAL POLYPUS—TECHNIQUE OF ELECTRO-CAUTERIZATION FOR HYPERTROPHIC RHINITIS.

Gentlemen:—Our first patient is complaining of "sore throat," and on examination we find a condition which is so characteristic that, without other history, we are justified in asking him when he contracted syphilis.

One observes deep ulceration in the region of the left posterior pillar, the entere pillar and the neighboring tonsil having been destroyed; also a deep, irregular ulcer on the posterior wall, which is covered with purulent fetid secretion. Near the centre of the velum, at its point of junction with the hard palate, is a gummy tumor, soft and caseous within, and with a small ulcerating surface aperture, through which the probe will pass. A perforation, therefore, already exists, and in a condition to extend rapidly, even perhaps to the point of extensive destruction of the velum and uvula. These are tertiary or late manifestations of syphilis which occur in the pharynx at a period of from one to five years up to any length of time after primary infection. They should be distinguished from the secondary throat symptoms, erythema, mucous patches and superficial

ulcers, which appear during the first three months and are liable to continue only through the year.

In this case further interrogation elicits a history of chancre eight years ago, which was followed by typical secondaries, and during the last four years, off and on, by severe throat lesions, the tertiary ulcerations. The tertiary ulcer originates by the formation of a gummy deposit in the depths of the tissue, which, through pressure interference with its own vascular supply, subsequently disintegrates and results in extended loss of substance. The process respects neither cartilage nor bone, and the ravages which certain neglected or virulent cases present, resulting in destruction of the nose, intranasal and pharyngeal structures, are truly appalling. Fortunately the disease is readily controlled by treatment, and potassium iodide for this stage is a specific. We will prescribe large doses for this patient, 60 to 100 grains per diem, for a time, taken in divided doses copiously diluted, on an empty stomach, in order to check at once the destructive gummy infiltration and disintegration of tissue.

Local treatment is of importance in limiting the ulcerative process and in promoting cicatrization. Perfect cleanliness should be maintained by antiseptic and alkaline sprays or washes, and the ulcers touched up daily with a solution of iodine and potassium iodide of each 20 grains in equal parts of water and glycerine to make one fluid-ounce, applied carefully by a cotton swab.

The next patient seeks relief from what he calls "catarrh," a colloquialism which is almost meaningless, for the reason that the symptoms indicated by the term can proceed from a score of different forms and distinct stages of disease, which may affect the upper respiratory tract. In this case the disability is occasioned by nasal polypi, or, more correctly speaking, nasal myxomata, and he suffers in consequence from obstruction of the nose, muco-purulent discharge, headache and aural complications. Reflex phenomena, such as asthma or cough, are not noted, for he has no tendency to bronchitis or emphysema, hence presents no susceptive peripheral point of attack, and his nerve centres are far from being in a superexcitable state, factors which are necessary, in conjunction with nasal irritation, to complete the reflex cycle.

On examination we find in each nostril several soft, elastic tumors, which are smooth in appearance, of a light yellowish or pinkish hue, and movable by the probe. They occupy the space between the middle turbinated body and the lower border of the inferior turbinal, extending over to the septum, leaving the inferior meatus almost clear. They are attached in the middle meatus and can be traced by the probe to the neighborhood of the hiatus semilunaris, from the sharp edges of which they evidently grow. Zuckerkandl, who made post-mortem examinations of some fifty distinct growths, ascertained that the middle meatus furnished the points of attachment in about two-thirds of all cases, and that two-thirds of this number proceeded from the edges of the hiatus semilunaris, a crescentic opening which unites, in the middle meatus, the apertures of the antrum of Highmore and the frontal sinus.

Polypi do not grow in healthy noses, and this patient suffers also from hypertrophic rhinitis, which is the most common cause and complication of nasal myxomata. His turbinated bodies are enlarged and the mucous and sub-mucous tissues thickened. When hyperplasia occurs upon a free edge, as at the hiatus semilunaris, the pendulous position with gravity, among other factors, favors the production of a circumscribed œdema and the transformation of the ordinary hypertrophic inflammatory process into a myxomatous type.

It is an extremely practical point in the radical treatment to be able to judge of the deep point of origin from the superficial position of the neoplasm and the direction of its pedicle toward attachment, as we can then often destroy the very root of the growth by insinuating a properly curved point-electrode to the spot.

This case was exhibited at the clinic on a previous occasion, and each of you had an opportunity to inspect it previous to the operation for to-day. To remove the tumors we may use a variety of means. The old method of "going it blind" with a pair of forceps is obsolete. The nostril is illuminated by reflected light. The instruments which are most in favor at the present time are (1) the cold wire snare and (2) the galvano-cautery snare. The latter has no advantage except the possible avoidance of hæmorrhage for a longer time when it is desired to snare several growths from a nostril at one sitting. The cauterization of the base secured by the hot wire snare is not of sufficient depth to avail in preventing recurrence. For this purpose the cautery point-electrode, deeply insinuated to the bone, must be employed after the cautery écraseur, as well as after the cold snare. In order that both methods may be observed, we will remove the polypi on the right side, in this case, by means of the cold wire snare, and then operate on the left side with the galvano-cautery écraseur.

We use the Allen snare, threaded with piano wire No. 5, an instrument which is so contrived that the wire can be drawn home by the same hand which holds it. Snares which require both hands to manipulate them are unsatisfactory, for the reason that one hand is otherwise needed.

The object is to carry the wire over the polyp and to insinuate it around the base of the tumor at its root, so that in shortening up the wire one may cut as closely as possible to the point of attachment. We have previously sprayed the nos-

tril with a 5 per cent. solution of cocaine. We will, for a few minutes, apply a stronger solution —10 per cent.—upon cotton. Now, having enveloped the mass of polyp by the snare, the nostril being distended bp a self-retaining speculum, we grasp the movable neoplasm with a pair of forceps, to prevent it slipping away from the snare, and even draw it downward, while the loop is pushed upward around the pedicle, which follows into the middle meatus. Thus, we have now removed not only one, but a whole group of polypi at a single snaring, there being five of them, pyriform in shape, making a single mass of perhaps three-quarters of an inch in depth by half an inch in width, all having a common base or stem.

Examined microscopically sections of these polypi would show a few round embryonic cells or anastomosing stellate cells, imbedded in an intercellular substance of mucin-containing serum. Nasal myxomata, however, usually contain enough fibrous tissues to include them, quite strictly speaking, within the class of myxofibromata.

We again spray with cocaine to relieve pain and then immediately cauterize the point of attachment by inserting a point electrode slightly curved on the flat, into the middle meatus and sweeping its white-hot surface over the edge of the hiatus semilunaris. On the left side the polyp, which we will remove by the galvano-cautery écraseur, is further to the rear and more difficult to reach. The instrument consists of a pair of parallel tubes threaded with a loop of steel wire (piano wire No. 5) inserted into a handle which carries a little windlass to wind in the wire. Platinum wire, usually recommended, is not well adapted to the purpose, as it is devoid of resilience, and cannot therefore be pushed between surfaces in contact without destroying the contour of the loop. From the ends of the steel wire which wind around the windlass the temper should be withdrawn by heating. The cords leading over our right shoulder connect the handle with the cautery battery. Otherwise the procedure is the same, and we withdraw thus quite a large myxoma. No hæmorrhage here, such as followed the cold snare on the other side, and we can see to remove another and perhaps still a third neoplasm. The pain attending the operations is not great, the patient, after the application of cocaine, being well able to withstand the necessary manipulations.

A few words in reference to the complications and the method of dealing with them in connection with the polypi. As already said, nasal polypus is not a primary disease, but a neoplasm which ensues largely in consequence of rhinitis. But all individuals with hypertrophic rhinitis are not affected by polypus. As with other neoplasms —sarcoma, fibroma or carcinoma, there may possibly exist a constitutional predisposition of a nature too subtile for demonstration. However, the hypertrophic rhinitis is the chief coexisting factor, stenosis and defective drainage ensue, decomposing muco-purulent secretions are imprisoned especially in the middle meatus, and furnish a suitable soil for polyp growth—a sodden condition of the mucosa which seems to favor the myxomatous form of hyperplasia. Stenosis also results in consequence of septal deviation and excrescences which, acting in conjunction with hypertrophy of the turbinated bodies, may so occlude the nostrils as to prevent the passage ot instruments and light to the seat of growth, and the exit of discharges. To effect a radical cure of nasal polypus one must also remove the causes and complications. Septal excrescences should be cut or sawed away, deviation straightened, and the hypertrophied turbinals treated by the galvano-cautery.

This last patient, gentlemen, affords an excellent example of hypertrophic rhinitis—the most frequent of all forms of nasal "catarrh." He complains of obstruction to nasal respiration, which alternates between the two sides, sense of nasal discomfort and pressure headache. All the turbinate bodies are enlarged, the right inferior turbinal at this moment having undergone erection to the point of complete obliteration of the cavity of the nostril.

We present this case solely for the purpose of demonstrating the method of treatment by the electro-cautery just recommended in connection with this disease as a cause of nasal myxomata.

Mild forms of the disorder can be successfully palliated, even cured, by the judicious use of antiseptic alkaline, and warm vaseline sprays, with systemic and hygienic aids. But for marked hypertrophy with stenosis the only satisfactory method of treatment is cauterization. Five per cent. cocaine solution on cotton is placed in contact with the whole length of this inferior turbinate body for five minutes, and meanwhile your attention is invited to the technique of the operation. The knife electrode is commonly used, but we prefer as better adapted to the purpose the ordinary point electrode, which we curve slightly upon the flat, using the surface of the platinum end, and not the very point, with which to burn. This makes a broader eschar than the knife electrode, it is less apt to occasion hæmorrhage, it requires less space in transit through the nostril, and it adapts itself better to the curved contour of the turbinal, permitting application further toward the posterior end of the body.

The cocaine retracts the erectile structures and temporarily provides space through which the unheated electrode is passed, the length of the platinum tip is pressed against the turbinate body, commencing as far posteriorly as one can see, and then, when at cherry-red heat from the battery, it is drawn slowly forward, marking its passage by the production of a white linear eschar.

Through this same linear eschar we now draw the instrument a second and a third time. More than one linear cauterization should not be made at the same sitting, but we have drawn the electrode three times along the same track in order to obtain sufficient depth, as the subsequent cicatrix, in addition to breaking up the free continuity of blood-vessels and substituting a certain overplus of tissue, should serve also to bind down the neighboring portions by attachment to the bony base. Bad cases require ten to twelve applications of the cautery, at intervals of one to two weeks, three or four on each lower turbinal and others of less extent on the middle bodies. Antiseptic cleansing sprays should be used during the intervals. The reduction of the hypertrophy will relieve all the pressing symptoms, but it will not remove the inherent tendency toward rhinitis, hence subsequent treatment should be pursued as for simple chronic rhinitis without pronounced hypertrophy.

MEDICAL PROGRESS.

THE STROPHANTHUS PULSE IN HEART DISEASE.—At the International Congress for Therapeutics and Materia Medica, Paris, 1889, BUCQUOI demonstrated the strophanthus pulse by means of sphygmographic tracings obtained from fourteen patients after the administration of strophanthus. The curves show the following peculiarities: The up stroke is higher and steeper and the angle more acute; the pulse resembles the aortic pulse. The increased cardiac action drives the blood more rapidly into the vascular system; the up stroke therefore becomes higher and steeper. The pulse becomes stronger, the number of beats diminishes and the pulsations generally become more regular. Contrary to the views of the physiologists, Bucquoi holds that strophanthus is not an agent that acts directly upon the vasoconstrictors, and that therefore it may be employed with advantage in aortic defects. Upon the whole, the remedy acts immediately upon administration. It may be given for a long time without disadvantage, and its effects are lasting, like those of digitalis, but it should not be given when the heart muscle is greatly weakened or degenerated; in these conditions strophanthus is without effect, and this failure of action indicates a grave prognosis.

Lépine expressed the opinion that the increase in the up stroke is caused by an increase in volume of the left side of the heart, which is a symptom constantly observed in experiments upon animals.

Konstantin raised the question whether one is justified in speaking of heart tonics. A true tonic should not only temporarily increase the strength of an organ, but should also lend it strenth to be stored up for subsequent use; such is the action of quinine in malaria. Heart tonics, although they do indeed regulate the pulse and increase its tension, nevertheless weaken its power, and paralyze it quite if the dose is increased or if they are given for too long a time. Their action is rather a supplementary one, affecting the obstacles in the circulation, rather than a strengthening one, acting upon the heart muscles. To the category of cardiac remedies which can be administered without injury for a long time belongs also the convallaria majalis, the active principle of which, although as yet unknown, seems to be found in the aqueous extract of the root.

THE ANTIPYRETICS.—PROF. LÉPINE, in a review of progress for 1889, expresses the following opinions relative to the value of some of the antipyretic agents: The study of the antipyretics remains the order of the day, and we have to record the continued success of antipyrin. Its field of usefulness has been extended to include the greater number of nervous affections and its action has proved beneficial in the most dissimilar kinds of cases. If each medicament, as some people affirm, displayed merely the same action in disease as in health, its indications would be sufficiently limited; but with such a remedy as antipyrin, which, upon the whole, is simply a nervine (sedative) of a particular class, the indications are infinite, because an abnormal nervous excitation may produce very different effects, varying according to the part af the nervous system affected, and because whatever these effects may be, a sedative agent, like antipyrin, for example, is capable, at least in certain cases, of removing them, provided it be employed in suitable doses. Thus, I have cured a case of hysterical anuria with antipyrin, although this substance is very far from being a diuretic.

The extensive employment of this useful agent has led to many accidents, not merely those of eruption and fever, but also to other still less expected and perhaps even grave, as, for instance, epileptiform accidents, although antipyrin has been considered a useful remedy in epilepsy; such accidents, however, should not surprise us, for they only confirm what has already been said.

Acetanilid continues to be but little employed in France, in spite of its cheapness, and in spite of incontestible advantages which it possesses in certain cases, such as the case with which it is tolerated by the stomach. Furthermore, it relieves pain better than antipyrin. Abroad, where acetanilid is not the object of unjust prejudice, its employment is increasing. Its use is also, and I may say especially, attended by accidents, for often sufficient attention is not paid to

proper dosage, although, to be sure, these accidents sometimes appear in spite of the greatest precautions. But the fault is not always attributable to the physician, or to the remedy, but sometimes to individual susceptibility—idiosyncrasy, as in the case of opium.

It is an incontestible fact that the antipyretics, to an even greater extent than opium, affect the susceptibility of certain nerve structures; thus, I know a lady who has given up antipyrin because of the dysuria and tenesmus which it produces in her case. But coffee produces exactly the same effect in other persons, who are obliged for this reason to abstain from its use.

Of phenacetin one hears but little. It is sufficiently anodyne, is certainly very useful, and has probably come to stay.

I do not think as much can be said of exalgine, which was introduced by Dujardin-Beaumetz and Bardeé. I confess that I have employed it but little, because when I first used it I found that it produced cyanosis, as does acetanilid, and because it did not appear to possess any advantage over the latter remedy.—*La Sem. Méd.*

LOCAL ANÆSTHESIA BY COCAINE.—M. RECLUS regrets that cocaine has not come into more general use. Although it has been pronounced inefficacious and dangerous, the writer has successfully employed it in injections more than 700 times. He finds that *intradermic* injections alone are efficient; cutaneous applications are without effect, while applications to mucous surfaces may sometimes be employed for slight operations. Cocainized injections in the washing out of hydroceles and old hydrarthoses have given excellent results.

As interstitial injections alone possess much value in operations upon the integument, care must be taken that the injections penetrate the skin itself, instead of passing into the subcutaneous cellular tissue. If the parts are very thick it will be well to make several injections, one over the other. Under such conditions anæsthesia is always obtained, and the same is true of inflamed tissues, although this has been denied. The reporter has seen the effects obtained by these interstitial injections continue for an hour, and has been able to perform radical operations without inflicting pain. The bones alone seem insusceptible to this influence. In ano-rectal affections and in the painful operations necessitated by them, the employment of tampons saturated in a 2 per cent. solution and a series of interstitial injections, forming a circle, will secure complete anæsthesia, so that dilatation of the rectum even can be performed painlessly.

The reporter has made 700 injections without accident; he has carefully searched the literature of the subject and has found only four reports of death, and in these large quantities of cocaine were used, viz: 75 centigrm., 1.20 centigrm., 1.25 centigrm. and 1.50 centigrm. Below 75 centigrm. there have been no serious accidents. Such appearances as pallor of the face, shortness of breath, loquacity, tendency to syncope, etc., have been seen, but with ordinary doses, 20 centigrm. or more, accidents are very infrequent. Ordinarily 10 to 12 centigrm. are sufficient.—*Congrés de Chirurgie, 1889.*

EXTIRPATION OF THE UTERUS IN AN AGED PATIENT.—DR. ULLMANN recently exhibited before the Society of Physicians of Vienna a patient 81 years of age, upon whom he had practiced extirpation of the uterus. The patient had suffered twenty years from prolapsus uteri, and for months the lower portion of the organ had been ulcerated. There was also rectocele, with moderate prolapse of the rectum, vesicocele, and slight prolapse of the urethral mucosa. A microscopical examination of the ulcerated surface demonstrated the presence of carcinoma. By reason of the favorable position of the organs and the slight danger of hæmorrhage Ullmann determined to extirpate the uterus. After the operation the bladder and vagina were pushed back and the vagina closed by silk sutures. As a result of cicatricial contraction the vagina was shortened. The bladder and rectum are now in proper place.—*Wiener Med. Woch.*

DETECTION OF ANTIPYRETICS IN THE URINE.—O. SCHWEISSINGER (*Pharm. Cent.*) proposes the following color reactions:

	After the addition of one drop of the perchloride of iron.	After the addition of one drop of concentrated sulphuric acid.
Phenic acid	Blue	Light yellow
Salicylic acid	Violet blue	Colorless
Resorcin	Blue	Yellowish brown
Kairin	Dull, dirty brown	Reddish brown
Antipyrin	Reddish brown	Colorless
Thallin	Green	Green

These reactions are produced especially when, after agitating the urine with ether, the latter is evaporated and the residue treated with perchlorate of iron or concentrated sulphuric acid.

TREATMENT OF ERYSIPELAS.—KOCH (*Wiener Klin. Woch.*) recommends for the treatment of erysipelas the application of an ointment consisting of creolin 1 part, iodoform 4 parts, lanolin 10 parts. This is applied with a bristle brush to the affected portions of the skin and three or four finger-breadths beyond to the healthy appearing portions. In twenty-five cases treated by this method he has observed, after three or four applications, a fall of temperature, limitation of the disease, and blanching of the skin. The after-treatment was also favorably influenced by this treatment.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.

PER ANNUM, IN ADVANCE.....$5.00
SINGLE COPIES.....10 CENTS.

Subscription may begin at any time. The safest mode of remittance is by bank check or postal money order, drawn to the order of THE JOURNAL. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE.,
CHICAGO, ILLINOIS.

All members of the Association should send their Annual *Dues* to the *Treasurer*, Richard J. Dunglison, M.D., Lock Box 1274, Philadelphia, Pa.

LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, FEBRUARY 8, 1890.

THE SURGICAL TREATMENT OF GENERAL PARALYSIS OF THE INSANE.

An examination of the reports of our insane asylums will show the large proportion of cases of general paralysis of the insane among the inmates of these institutions, and treatment has rarely resulted in recovery. Sometimes, as is familiar to the medical officers of asylums, there will be a marked improvement in the mental condition of patients of this class, and the hope is entertained that recovery will follow; but this improvement is usually temporary, and the relapse is a condition worse than before.

A short time ago DR. T. CLAYE SHAW reported in a conservative manner a case of general paralysis with bulbar symptoms, that was seen also by DR. FERRIER, who agreed that the case was fast becoming one of dementia, and that trephining alone afforded hope of relief. Dr. Shaw based his conclusions of the promise of relief afforded by the operation on the fact that pathological appearances indicated irritative processes in the upper layers of the convolutions, with later pressure symptoms; and, as nerve stretching (suspension?) had proved beneficial in ataxia, brain stretching—that could only occur by increasing its space for expansion—would relieve the pressure of the cerebral fluid and diminish the arterial tension that the sphygmograph has shown existent in such cases.

Accordingly, in this case the patient was trephined over the right central sulcus, about two inches outside of the longitudinal fissure. MR. HARRISON CRIPPE operated, making two holes with a trephine and, cutting away the intermediate bone, secured an opening in the skull about one and one-half inches long by three-quarters of an inch wide. The dura mater was then incised and a "considerable quantity" of subarachnoid fluid escaped. By the tenth day the wound had healed, and no cerebral symptoms had been present after the operation. Though there was but slight improvement in the bulbar symptoms, those of *folie de grandeur* no longer existed. The patient was seen by DR. CLIFFORD ALLBUT, who agreed with Dr. Shaw that the man was no longer insane.

Subsequently the distinguished alienist, DR. J. BATTY TUKE, reported a case of paresis that he saw in consultation with DR. MUIRHEAD, in the early stage of the disease. In this case there was a syphilitic history, but the symptoms of intracranial pressure were so marked that the patient was trephined above each parietal eminence. The bone was thicker on the right than the left side, and the dura mater bulged on the former, but not on the latter side. The wound healed by first intention, and for five days the patient's hallucinations ceased and he seemed more rational. At the end of that period the old symptoms returned, and the patient was subsequently transferred to an insane asylum, and when last seen was markedly ataxic and had pronounced dementia. It will be noticed that in this case, that was operated on just a short time previous to Dr. Shaw's, the trephine opening was not so large, nor was any attempt made to drain the dura mater, an omission that Dr. Tuke would have remedied, had the case remained under his care.

If we examine the reasons for the operation we find that we have a disease that is usually fatal, from a destruction of the functional activity of the brain by intracranial pressure. The experiments of ADAMKIEWICZ, NAUNYN and SCHREIBER have shown that slight variations in pressure will cause certain definite phenomena, and it is a reasonable conclusion, that has almost been positively demonstrated by these two cases, that a relief of this pressure will relieve the symptoms in general paralysis of the insane. It is not to be presumed that the connective tissue changes that take place in the vessels and convolutions will be at once absorbed; but the brain is restored

to a more nearly normal condition that will probably admit of compensatory changes occurring. The operation, if properly performed, entails but moderate danger to the patient, and it is worth while considering whether even temporary alleviation of the condition is not desirable for the patient as well as for his relatives.

Certain English as well as German alienists have hastened to condemn Dr. Shaw's operation, on theoretical grounds, the Germans even asserting that any permanent benefit is as fallacious as to expect any permanent improvement to follow "wet stretching" of the sciatic nerve for ataxia. But the gentlemen associated in these two cases occupy positions that entitle them to a respectful hearing from the profession, and the operation must be condemned not by theory, but practice.

CORRECT OFFICIAL INSTRUCTIONS AS TO DISINFECTION WITH SULPHUR.

The Kentucky State Board of Health has put forth a circular about contagious disease prevention, which is the first, within our knowledge, that instructs the people how to thoroughly disinfect the sick-chamber, after the recovery or death, or removal of the patient. The circular in question is issued with the intent to prevent diphtheria, that disease having been unusually prevalent in many sections of the State. Its teachings with regard to the rigid observance of the known modern requirements as to fumigations with sulphur are much more accurate than the average board of health directions. They, of course, apply to other communicable diseases besides diphtheria. They are in effect the teachings of the report, of three years ago, prepared by DR. G. M. STERNBERG and his associates on the special committee of the American Public Health Association. In that report the injunction is frequently given that all fumigations by sulphur shall be done "in the presence of moisture." As will be seen in the paragraph given below from the new Kentucky circular, this "moisture" is sought to be provided for by the dampening of the contents of the chamber that is to be cleansed. This circular directs the following procedure:

"To disinfect the room proceed as follows: Arrange the contents of the room so as to expose the greatest amount of surface to the action of the disinfectant. Close the apartment as completely as possible, stopping all openings, as chimney flues, key-holes, etc., through which the gas might escape. *Thoroughly dampen the floor, walls and furniture.* For a room 10 feet square use 3 lbs. of sulphur, moistened with alcohol, in an iron pan placed in a tub containing a few inches of water, to avoid danger from fire. When certain the sulphur is burning well, leave the room, close the door and allow the room to remain tightly closed for ten or twelve hours. Afterward the room should be thoroughly ventilated for several hours, and then the floor, and ledges over windows and doors, and other places likely to retain dust should be washed with the chloride solution and then with soap and hot water. The house and premises generally should be put in the cleanest and best condition possible."

Whether this method is the best and whether it is free from objection, time will demonstrate. There may possibly result from it some bleaching of colored articles by the action of nascent oxygen liable to be generated when the sulphur dioxide comes in contact with wetted goods, and there may be some minor damage beside. We are aware that the method recommended by DR. E. R. SQUIBB, cited on page 448 of the current volume of this journal, calls for a larger amount of "moisture" and directs that it be present in a different form, namely: as vapor of water, produced by boiling, within the apartment, while the fumes of sulphur are in process of liberation. The experience of a hundred health officers and others has demonstrated, as we believe, beyond the peradventure of a doubt, that sulphur has an efficiency excelled by few, if any, of our utilizable chemicals, and it is very much to be hoped that its position as a disinfectant may be strengthened by the adoption of right methods of employing it. For this reason, if for none other, we would call the attention of all those who have considerable dealings with contagious diseases to the new circular of the Kentucky Board of Health, as an improvement upon those which have been disseminated by our authorities during recent years.

CINCINNATI OBSTETRICAL SOCIETY.—Dr. W. H. Wenning has been elected President, Dr. T. P. White, Secretary, and Dr. J. L. Cleveland, Treasurer, of the Cincinnati Obstetrical Society.

THE ASSOCIATION OF THE FUTURE.

No one familiar with the facts, will fail to accord to those who have labored so earnestly for its welfare the full meed of praise so justly their due for the successes which have attended, in the organization and development of the American Medical Association in all its past history. But we should be dull students indeed, if in all these forty years since its organization we had not gained some experiences that shall prove valuable with reference to its further development. Our annual meetings have been, to those attending, both pleasing and profitable. During the six years of its existence THE JOURNAL has been an added means in increasing the interest of the medical profession in the welfare of the Association.

But the fact remains, that though a certain number is added each year to the membership, by reason of attendance upon the annual meetings —still the aggregate is not materially increased.

When we appreciate the fact that under wise and timely effort it is possible to combine in one association a very large percentage of the one hundred thousand regular physicians on this continent and to number its membership by thousands, as it now numbers them by hundreds, we are impressed with the conviction that the counsels of our wisest and best men should be summoned to the solution of this important question.

Men of ability, men of culture, may and do find pleasure and profit in their annual meetings devoted to special subjects, and in presenting their valuable papers before a coterie of like cultured hearers.

But what were this in comparison with the reading of those same papers before a thousand listeners who have need of the truths they are so able to express?

Is there not possible a union of all the strong men in the nation for the furtherance of every department of medicine and surgery?

Is it not feasible that an executive committee may so formulate for each meeting a programme, and so designate the persons to participate in the discussions, as to amply reward attendance by the masses of physicians, whatever may be the grade of their attainments?

The Association should forever be divorced from Sectional or personal schemings or personal ambitions. Above and beyond all individual interests it should be catholic in spirit, National in its representation, and grandly representative of the entire medical profession on this Continent.

We invite the candid expression of the matured thought of men who have the welfare of the Medical Association of the future at heart, as to the measures necessary to the accomplishment of these results.

EDITORIAL NOTES.

HOME.

THE DATE OF THE ANNUAL MEETING.—There seems to have been a misapprehension on the part of some members of the Association as to the date of the next annual meeting. This doubtless arises from the fact that the place of meeting governs as to the time when it shall be held. In the Southern portions of the Union the sessions are held in May, while in the Northern States they are convened in June. For special reasons the last meeting was deferred until June 25. Reverting to the established rule, the Association will meet this year at Nashville on Tuesday, A.M., May 20, the third Tuesday in the month.

THE SECRETARY'S REQUEST.—Members of the medical profession who desire to secure special rates for themselves and their families in attending the meeting at Nashville in May, or the International Congress at Berlin in August, will find it for their interest to confer personally with the Secretary of the Association. Address Wm. B. Atkinson, 1400 Pine St., Philadelphia, Pa.

THE BACILLUS OF INFLUENZA.—It is reported that a bacillus has been identified at Vienna as peculiar to epidemic influenza. It has points of resemblance to the coccus of pneumonia, but is not identical with it. It is described as being dark blue in color and having a cassock-shaped head. One writer says that it is not unlike the exclamation point; which, if true, will bring it into the punctuation series of Dr. Koch, who inaugurated that series with the comma bacillus of cholera.

SALUS POPULI.—"The real wealth of a people is not counted by its gold, silver, or broad acres. These are sources of material interest and physical greatness; above these, as high as the heaven is above the earth, as a simpler question of value, is the health of the people. Here is the manhood, the real civilization, the source of its con-

tent, happiness, and its good will to men."—Dr. J. W. Jones, in *The North Carolina Bulletin*, January.

THE DAWSON PRIZES.—The annual contest for the Dawson prizes at the Good Samaritan Hospital, of Cincinnati, was entered by a larger number of aspirants than usual. These contests in bandaging, drawing and dissecting are made by the students of the Medical College of Ohio, and excite much rivalry in their respective departments. Five doctors from Cincinnati and vicinity are chosen in each arena to act as judges. They render their decision impartially and hand it to Dr. Dawson in a sealed envelope, which he opens Commencement night, and announces the successful names. The occasion is made a half holiday, with Prof. Dawson as master of ceremonies. A number of speeches are made, interesting cases are shown, and the annual feast winds up the occasion. The students and profession greatly appreciate Dr. Dawson's great-heartedness and liberality.

FOREIGN.

EXHIBIT OF NURSING UNIFORMS.—The medical journal, *Hospital*, has organized an exhibition of uniforms for nurses of over a hundred patterns at the Charing Cross Hospital, London. These are chiefly the uniforms devised and in use in institutions of Great Britain. The various costumes are draped upon miniature figures and are the work of the nurses. The show will probably be so interesting and attractive that it will be made permanent for purposes of reference.

SKIN-GRAFTING FROM THE GREYHOUND.—In one of the London infirmaries a boy, badly burned from knee to ankle on one leg, has been under treatment. Shortly after admission extensive skin-grafting was put in practice, the grafts being taken from a greyhound pup. The skin-strips that were applied to the burned leg were about 6 inches in length and ½ inch in width. They were all united except one, at the end of four days. The patient was discharged cured at the expiration of six weeks after the grafting was practiced.

A NEW SANITARIUM.—The Gilbert Islands may possibly come into prominence as a sanitarium for consumptives, if the reports are true regarding the novelist, Robert Louis Stevenson. These islands, also known as the Kingsmill group, lie in the mid-Pacific waters, and thence has come the report that Mr. Stevenson has found a climate specially suited to his condition, and that he is growing stout.

A HOME FOR CONVALESCENTS.—Sir William Savory has just announced, through the London medical journals, that £100,000 sterling will presently be donated by an anonymons philanthropist for the construction of a convalescents' home near London. Mr. Savory and Mr. Cross, both of St. Bartholomew's Hospital, will be on the Board of Trustees.

THE MEDICAL SICKNESS-RELIEF SOCIETY.—About five years ago there was organized in London a society of medical men for their mutual insurance against sickness and accident and for like purposes. The full title of the company is the Medical Sickness, Annuity and Life Assurance Society, and is indicative of the wide range of self-help designed to be brought within the operations of its charter. It enables young and old, practitioners of every part of the country, to unite in making a mutual provision against the financial calamities of sickness, accident, disablement, chronic disease and death. The cost of running this society is less than 5 per cent. of its income, whereas 18 per cent. is a low average cost for insurance management, according to the authority of the *British Medical Journal;* and this unprecedentedly cheap insurance is effected by reason of its having a Council of management of medical men who serve without charge. The reserve has reached nearly $185,000, and a balance of profit has accrued to the amount of $30,000, the property of the members. The relief which has been extended has been most timely and encouraging in many instances. One member who had contracted a purulent ophthalmia states that he feels that he would have died but for the prompt aid which the Society afforded him, and which made it possible for him to get a change of air and surroundings at a time when he was losing ground constantly and rapidly.

THE RIGID STAATS-EXAMEN.—A late report of the German board which conducts a portion of the Staats-examen inquiries in medicine and surgery, shows that of 683 candidates 504 were rejected, or a proportion of only 26 per cent. of successes.

TOPICS OF THE WEEK.

DIPHTHERIA.

MM. Roux and Yersin have published in the *Annales de l'Institut Pasteur* two memoirs entitled "Contribution à l'Etude de la Diphthérie," in which they minutely describe their methods of research and the results they afforded. The bacillus of diphtheria cultivated in broth renders it acid, afterwards alkaline; in the alkaline state it is excessively toxic in consequence of the soluble products contained in it. These products, used for inoculating guinea-pigs, rabbits, and small birds, produce, according to the dose, acute diphtheria or a chronic septic condition accompanied by characteristic paralysis. A series of experiments made by these investigators show that the bacillus of diphtheria secretes soluble toxic substances. These MM. Roux and Yersin supposed might probably resemble a ferment. They sought to ascertain in the organs of patients dead from diphtheria the presence of the same diphtheritic virus that was detected in the microbe cultivations. The spleen of a child which had died from diphtheria was macerated and crushed in water, then filtered; 8 cubic centimetres of the fluid were inoculated under the skin of a guinea-pig; 30 cubic centimetres were injected into the veins of a rabbit. The guinea pig grew thin and died five days after the injection; the rabbit lived two months; the hind legs became paralyzed. When the diphtheritic virus is filtered away from the cultivation broth it remains intact a considerable time, provided it is not in contact with the air. This virus is most virulent in an alkaline medium; in an acid medium a strong dose is necessary to kill the animals under experiment. MM. Roux and Yersin suppose that the alkaline properties of the cultivation fluid are due to the oxidation of the nitrogenous substances contained in the broth. Cultivations made out of contact with the air are not alkaline. In cultivations two or three months old crystals of ammonia-magnesium phosphate appear. Filtered cultivation fluid mixed with lactic or tartaric acid injected into guinea-pigs, caused slight œdema; a dose of half the quantity in which the acid was neutralized caused death in a short time. The longer diphtheritic virus remains in contact with an acid the weaker it becomes; carbolic and boric acid and borax retard the toxic action but do not arrest it. Introduced into the digestive tract diphtheritic virus does not produce any disturbauce even in large quantities. In certain respects this virus appears to resemble diastase, although it does not change sugar nor albuminoid substances. It acts specially on the coats of vessels, causing vascular dilatation, hæmorrhage and œdema, resembling somewhat the action of venom. Animals do not get accustomed to the influence of this virus. This is frequently manifested after inoculation. MM. Widal and Chantemesse, in a series of careful researches on the bacillus of diphtheria, have observed that the solution of Dr. Soulez (de Romorantin), which consists of 5 grams of carbolic acid, 20 grams of camphor, 30 grams of olive oil, does not arrest the cultivation of the bacillus, but renders it slower; nor does the addition of tartaric acid according to M. Gaucher's method increase the antiseptic properties of the solution. These investigators think that this negative result is owing to the presence of olive oil and fatty bodies. Oils are bad sterilizing media, because they do not moisten the cells. Camphorated naphthol has been used with satisfactory results in M. Chauffard's wards in the Broussais Hospital. MM. Widal and Chantemesse in their laboratory experiments found the following mixture the most successful: 25 grams of glycerine, 5 grams of carbolic acid, 20 grams of camphor. The mixture is shaken for ten minutes in a water bath. When cold this mixture separates into two layers—a lower and an upper; the former fluid, the latter white and viscous —a compound of glycerine, phenol and camphor. Silk threads impregnated with the virus of diphtheria were plunged for twenty seconds in this mixture, then washed in alcohol at 95°, and used for inoculating a tube of broth; but the broth remained sterile. Nevertheless, alcohol at 95° does not kill the bacillus of diphtheria. This mixture has not yet been used in treating diphtheria, but MM. Widal and Chantemesse say it is slightly caustic, and adheres to the surface with which it is in contact. It may be applied twice a day to the throat. Every day the throat should be well washed out with a solution of naphthol, or of carbolic acid. In order that the antiseptic agents may come in contact with the mucous membrane, the false membranes should be removed by means of a tampon of wool. Herr Kolisko and Herr Paltauf, in fifty cases of diphtheria, studied in the course of two years' researches on croup and diphtheria, invariably found Löffler's bacillus in every form of diphtheria which fell under their notice. In a case of vaginal diphtheria it was absent. Widal's researches have proved that this form of diphtheria is due to the presence of the streptococcus pyogenes. Löffler's bacillus develops easily in the serum of blood mixed with a quart of nourishing sweetened broth, also in pleuritic effusion mixed with peptone and sugar. Near the false membranes or in the mucous membrane, MM. Kolisko and Paltauf have observed, in addition to Löffler's bacillus, staphylococci and streptococci; in the liver they only observed it once. Inoculations with pure cultivations of Löffler's bacillus only caused inflammation, but the cultivation fluid, passed through a porcelain filter used for inoculation, killed the animals under experiment. Staphylococci and streptococci are inert. Kolisko and Paltauf believe that Löffler's bacillus is the sole cause of diphtheria.—*Brit. Medical Journal*, December 28, 1889.

PERNICIOUS ANÆMIA.

More evidence in support of the view of pernicious anæmia being a hæmolytic process, initiated, probably, by some ferment in the gastro-intestinal tract, and evinced, therefore, most markedly in the portal blood, a view well worked out by Dr. W. Hunter, of Cambridge, has been lately adduced by this observer in a series of papers contributed to the *Practitioner*.[1] The subject matter of his contributions consists in observations on the excretion of pathological urobilin, of blood pigment, and of iron. He made careful analyses of the urine in a typical case of the disease, and draws especial attention

[1] "Observations on the Urine in Pernicious Anæmia." By Wm. Hunter, M.D. (From the Cambridge Pathological Laboratory.)

to the exceedingly high color of this fluid, although the average specific gravity was never above 1016. Indeed, in the later stages, when the quantity passed was greatest and the specific gravity lowest, this deep coloration was most marked. Such a condition cannot fail to arrest attention, for it is in marked contrast to the character of the urine in other forms of anæmia. The fact, too, has been noted by other observers. Bile pigments were not the cause of the coloration, but spectroscopic examination proved the presence of pathological urobilin, which MacMunn has shown to be distinct from the urobilin of normal healthy urine, and its occurrence was found to be associated with an excessive elimination of bile into the intestine. This increased production of bile pigments indicated an increased disintegration in the liver of hæmoglobin; but Dr. Hunter remarks that not all the "pathological urobilin" could have had this hepatic origin, since at death, when the urine still remained of high color, there was no excess of bile in the duodenum or small intestine. The probability is that other organs also yielded this product of blood destruction, and that some of the pigment in the urine was due to increased absorption from the intestine. Besides this, however, a study of the minute appearances of the kidney in this disease shows an accumulation of pigment granules in the epithelium of the convoluted tubules during life, whilst tube-casts and cells containing such granules may be detected, especially at certain periods of exacerbation of the disease, when it might well be inferred that the blood destruction was more intense. These facts led to an inquiry as to the excretion of iron in the urine in health and disease. Dr. Hunter estimates that the average daily excretion of iron is from 3 to 5 milligrams. It is remarkable that the administration of iron by the mouth very slightly, if at all, increased the amount of iron excreted. Dr. Hunter found in one observation in health the quantity of iron excreted in the urine was 5.65 milligrams; in one case of chlorosis, 1.71 milligrams; in another, 1.96 milligrams; and in a third, 1.61 milligrams, considerably lower than the average, but consonant with the diminished richness of the blood in hæmoglobin characteristic of this affection. In a case of pernicious anæmia, however, the amount of iron in the urine passed about three weeks before death was no less than 32.26 milligrams, twelve days later 6.52 milligrams, and two days before death only 1.00 milligram. It is just ten years ago that Dr. Finny reported a case of pernicious anæmia in which Dr. Emerson Reynolds found a considerable quantity of iron in the urine; but otherwise the observations on this head are comparatively few. Still, such as they are, they harmonize completely with the hæmolytic theory, and are all the more striking when it is remembered how very deficient the blood is in coloring matter during the closing stages of the disease. Dr. Hunter thinks that these three conditions of the urinary pigments—viz: the presence of pathological urobilin, the presence of granules of blood pigment as detected by the microscopical examination of the urine, and an increased excretion of iron—are of importance not only from the pathological standpoint, but also diagnostically. Not, indeed, that such changes are always to be noted in pernicious anæmia, but in periods of its course, periods when the disease is undergoing exacerbation, and which the examination of the blood, as well as the general condition of the patient, prove to be periods of increasing hæmolysis; for pernicious anæmia is seldom—in its earlier stages at least—regularly progressive. Many physicians have had experience of cases in which there was amelioration for a time, followed by a subsequent rapid relapse of the weakness and anæmia; and the irregular pyrexia so characteristic of the affection also seems to denote this liability to exacerbation. The observations he has made regarding urobilin likewise tend to support Dr. Hunter's contention of the blood destruction being initiated in the portal system, and we look forward to his promised further investigations into the nature of the gastro-intestinal changes which he believes to be the *fons et origo mali*, and into the measures to be taken to combat these changes; for if his view be the true one, it is hopeless to expect any other permanently successful method of treating pernicious anæmia than by attacking the disease at its source.—*The Lancet.*

ERYSIPELAS.

From a leading article entitled "Facial Erysipelas," by Dr. Geo. T. McCoy, published in the January number of the *Indiana Medical Journal*, we quote the following conclusions:

1. Erysipelas, as it exists to-day, is the same disease, with the same characteristics, as the disease known by the same name in the days of Hippocrates.

2. It is a local disease, with marked constitutional symptoms.

3. It exists only as a traumatic erysipelas, and is a contagious, infectious, parasitic disease.

4. That with the erysipelas cocci are other pathogenic germs, producing, when introduced into the system, their peculiar morbid effects.

5. That the erysipelas cocci, when introduced into the organism, acts by developing a chemical substance known as ptomaine, to which is due the systemic intoxication.

6. Erysipelas and lymphangitis are probably identical, differing only in degree.

7. That in the arrest of the disease the phagocytes play an important part, and are probably the agents by which the organism rids itself of the infectious bacteria, their mode of action not being definitely determined.

8. Attacks of erysipelas may modify the character and development of malignant growths, and in some cases produce permanent cures.

INCOMPATIBLES OF ANTIPYRIN.

An editorial paragraph in the *British Medical Journal* suggests that the liquid extract of cinchona and mixtures of chloral hydrate are not compatible with antipyrin.

The writer in the *Journal* does not assert that the result ot the combination of chloral with antipyrin may not contain the properties of the drugs. A fuller investigation can only determine whether the mixture is potent or inert.

PRACTICAL NOTES.

THE TREATMENT OF INFLUENZA.

M. Henri Huchars, writing in the *Reque générale de Clinique et de Thérapeutique* of Dec. 12, 1889, offers some suggestions concerning the treatment of influenza which may be of interest at this time. "In all epidemics of the disease," he says, "the most marked clinical feature is the adynamic character of the symptoms, and it is against this that treatment should be chiefly directed. For this reason preparations of cinchona, alcoholic beverages, and the like, should be prescribed early; and in grave cases, where the prostration is profound, injections of ether or of caffeine may be needed. Quinine is generally indicated by the remittent character of the fever, and, for the control of this, should be given in one dose of from eight to fifteen grains in the forenoon. If the fever persists in spite of this, it may be well to give fifteen grains of antipyrin in the evening. But even when the fever is not high the use of quinine in tonic doses is advisable. In the rheumatoid or neuralgic forms, characterized by severe pains in the joints, muscles, and other parts of the body, we may resort to antipyrin in doses of fifteen grains two or three times a day. Instead of this drug we may use phenacetin or salol in eight-grain doses. When the disease assumes the broncho-pulmonary form the adynamia is commonly very pronounced, and the necessity for stimulants becomes even more pressing. The nourishment should consist chiefly of milk, which acts as a diuretic, and favors the elimination of the waste products. Blisters are inadmissible in the pneumonia following influenza, which is preeminently a local manifestation of a general disease, for they do not benefit the local process, and only aggravate the general condition. Occasionally the dyspnœa, even when the pulmonary affection is apparently limited in extent, becomes extreme. In this case much benefit is often derived from the use of strychnine. Sometimes, especially in the renal form of the affection, the only thing that will relieve the dyspnœa is a venesection, though ordinarily this is the last thing thought of in a disease in which the adynamic tendency is so pronounced. In the gastro-intestinal form it is necessary to employ mild purgatives, such as castor-oil or calomel, and to obtain intestinal antisepsis by means of salicylate of bismuth, or of magnesia, naphthol, etc. If an emetic is at any time indicated, tartar emetic should never be used, but ipecac given in preference."—*Medical Record.*

TREATMENT OF INFANTILE DIARRHŒA.

In a paper on the fermentative diarrhœas in infants, read before the Harveian Society and reported in the *Lancet*, Dr. Luff, while admitting that though probably several irritating substances from the fermentation of milk are factors in the production of the form of acute infantile diarrhœa under consideration, contended that the principal cause was the milk or cheese ptomaine, tyrotoxicon, produced during the fermentation of milk under certain conditions. The treatment of acute infantile diarrhœa with the view of arresting the abdominal intestinal fermentation was then considered. Carbolic acid, creasote, resorcin, salicylic acid, salicylate of soda, naphthol, and salol have been given in the hope of checking the putrefactive changes in the bowels. Ringer has recommended the administration of a weak solution of bichloride of mercury in infantile diarrhœa attended with very slimy stools. Dr. Luff then referred to Illingworth's antiseptic treatment of infantile diarrhœa, which he had himself found most useful, and the employment of which had first directed his attention to the treatment he now employed. This treatment consists in the administration of one-fiftieth of a grain doses of the biniodide of mercury dissolved in iodide of potassium, combined with one-grain doses of chloral hydrate. It was shown experimentally that the soluble biniodide of mercury is an extremely soluble and diffusible salt, and that it possesses the property of combining with and rendering insoluble the milk ptomaine, tyrotoxicon. He has never found that the soluble biniodide of mercury itself acts as an intestinal irritant. Of eighty cases of acute infantile diarrhœa treated by this method, the diarrhœa ceased within two days in seventy-two of the cases; in five of the remaining eight cases it ceased within four days, and in no case did it last over seven days.—*Medical News.*

INTRA-LARYNGEAL INJECTIONS OF MENTHOL IN PHTHISIS.

Mr. Walker Downie, in the Glasgow *Medical Journal*, December, 1889, reports excellent results in the treatment of tubercular laryngitis early phthisis with the intra-laryngeal injections of solutions of menthol in olive oil. To the solution he usually adds pure creosote in the following proportions:

Creasote	2 parts.
Menthol	12 "
Olive oil	86 "

An ordinary hypodermic syringe with a detachable vulcanite laryngeal tube is the most satisfactory apparatus. In administering the injection the laryngeal mirror should be used, by means of which the curved nozzle can be guided into the larynx without coming in contact with the tongue or fauces, thus obviating all risk of retching. The point of the syringe should be just below the vocal cords when the fluid is injected. If the fluid is applied to the cords, it produces a choking sensation, often with spas-

modic cough. From twenty to thirty minims should be injected at intervals of a few minutes until a drachm and a half has been used. The patient's immediate sensations are a comfortable warmth throughout the chest, loss of inclination to cough, and disappearance of "tightness" of the chest, if it existed. Cough is often absolutely checked for from four to eight hours. Expectoration is reduced in amount and purulency. The majority of patients gain in weight, and high temperature is often permanently reduced during treatment.

The probable explanation of these effects is that the menthol acts as a local anæsthetic to the mucous membrane of the larynx and bronchi; that it is a powerful, though harmless, stimulant; and that it is an antiseptic which, being very volatile, is rapidly diffused throughout the lung. —*Medical News.*

THE CLIMATOLOGY OF HÆMOPTYSIS.

Dr. Roland G. Curtin, of Philadelphia, in an address before the American Climatological Association, June 25, 1889, tabulates the influence of climate on hæmoptysis under two heads: first, the preventive and curative; and second, the causative:

1. Preventive and curative elements.

Rarefied air arrests the ulceration or other diseased processes and lowers the arterial tension. This greatly overbalances the unfavorable tendency of increased heart action and loss of support to the lungs from diminished air pressure.

Cold air contracts the tissues and blood-vessels, thus preventing a flow of blood when such tendency exists. Its general invigorating effects are beneficial.

Dry air dessicates the pulmonary tissues, decreases the fluidity of the blood, and blocks up the blood-vessels—all favoring the arrest and prevention of bleeding.

Aseptic air favors repair and cure of lung disease, and kills or dwarfs the action of the disease germ.

Outdoor life, when not associated with too much exposure, exertion or fatigue, is beneficial.

Sunshine improves the general nutrition.

2. Causative elements.

Sea level air, by its greater density, diminishes the tendency to hæmoptysis, but the increased arterial tension and the moisture usually present in such localities more than counterbalances the beneficial effect of the support given by the air pressure.

Salt air hastens the breaking down process in tubercular lung disease. The effect is probably good in syphilitic lung troubles, and sometimes in simple chronic inflammatory, non-tuberculous lung affections.

Moist air hastens the ulcerative process, liquefies the blood and secretions, and renders the tendency to the oozing and flowing of the blood more liable.

Warm air relaxes the tissues and blood-vessels and enervates and relaxes the system at large.

Thus he concludes that each case should be carefully studied in all its phases before deciding upon a change of residence. On a high mountain (say from 5,000 to 10,000 ft. [1,550–3,100 metres]), a residence far removed from the sea-coast, is best for a patient with a tendency to hæmoptosis. At a location of this kind one would probably have not only a rarefied, but a cold, dry, aseptic air—factors which would be most beneficial. Care should be taken that the elevation of the patient should be gradual and not too rapid; otherwise the early effects of a sudden elevation might be followed by unpleasant results. A case of syphilitic phthisis will probably be benefited by sea air, while a tubercular patient would be injured by it. —*Satellite.*

CHLORAL HYDRATE IN SCARLET FEVER.

As a rule, the drug is easy of administration, and well borne by the stomach. Wilson says: I have found its acrid after-taste best marked by the administration in Aubergier's syrup of lactucarium, diluted thus:

℞. Chloralis. . . . . gr. xxx.
Syr. lactucarii (Aubergier), ...
Aquæ. . . . . āā ℥iss.

M. Sig. A teaspoonful in iced water every two, three or four hours.

The administration of nourishment immediately after the medicine is desirable. The sleep-inducing properties of the drug manifest themselves rapidly, but are not prolonged; therefore, its repetition at intervals of two or three hours is called for—*Medical News.*

SALOL IN GONORRHŒA.

Dr. Dreyfous has treated seven cases of gonorrhœa with salol. The doses varied from five, seven to eight grams. The discharge was less abundant. In a recent case, in which gonorrhœa appeared some time before seeking advice, Dr. Dreyfous obtained a complete cure in a few days. M. Dreyfous has tested the effect of salol administered alone, and in other instances he has given it simultaneously with copaiba and cubebs in order to hasten the cure. He recommends the use of salol to surgeons who operate on the urinary organs; it renders urine aseptic, which is thus innocuous when in contact with raw surfaces. Aseptic and antiseptic conditions result from giving salol internally.—*Brit. Med. Journal.*

SOCIETY PROCEEDINGS.

Allegheny County Medical Society.

Special Meeting, Nov. 19, 1889.

W. F. KNOX, M.D., PRESIDENT, IN THE CHAIR.

[Abstracted for THE JOURNAL.]

CASE OF AMPUTATION AT HIP JOINT.

DR. MURDOCH: This case of amputation at hip-joint I did at the West Penn Hospital on the 28th of August—twelve weeks ago. Recovery from an amputation at the hip-joint is a very rare occurrence in an adult. The operation has been done a good many times. I have performed it several times myself, and this is the first case of recovery I have had. The case is also interesting because of the disease. I have in my hand the femur of the patient who suffered this amputation. It is from a girl 18 years of age, from Beaver county, a native of Pennsylvania. When, last February, she suffered some pains in the upper part of the thigh, she applied to Dr. Simpson, of New Brighton, who recognized an osteo-sarcoma, and brought the girl to me at the West Penn Hospital on the 23d of August. The tumor was then very much enlarged and I amputated at the hip-joint. The disease is, as you see, osteo-sarcoma. It involves chiefly the periosteum, and that is said to be the most malignant type of that disease, more likely to recur than when it attacks the centre of the bone. It has been twelve weeks since the amputation, and the girl is now in perfect health. At the time of the operation she was emaciated, could not sleep without large doses of morphia, and since the amputation she has been in comparatively good health, her pain has left, and there has been no return of the disease in the stump. Amputation at the hip-joint possesses an exceedingly great mortality. So great is the mortality following primary amputation at the hip-joint that of the twelve amputations made in the Crimean war—primary amputations—all died. Previous to our own war, of thirty cases of primary amputations, owing to gunshot injuries, not one survived. The history of primary amputation at the hip-joint in our war is a little more favorable, but not much. There were nineteen primary amputations, and of these eleven died from the shock of the operation within a few hours after amputation; five died within forty-eight hours from other causes, and there were only three who recovered, and only one that was known to be alive two years after the amputation, and that one case I feel particular interest in, as I was the surgeon who controlled the artery at the time of the amputation. This is known in the history of the war as the Shippens case, and was performed on a Pennsylvania private, a young man by the name of John Kelly, who is now living at Black Lick, in this State, in excellent health. This is the only case on record, I believe, that has lived over two years after primary amputation at the hip-joint. Amputations for disease are a little more favorable than for injury, and there are a great many cases of recovery, but still even then it is a very fatal operation. Mr. Lister's abdominal tourniquet has been a great assistance to surgeons in this operation. In the case I report I was able to control the hæmorrhage very effectively by the reliable assistants who assisted at the operation. I will not go into a description of the operation. The girl is now well. I pass this specimen (the tumor and the femur) around among you; it is a beautiful specimen of osteo-sarcoma—one of the finest of which I know.

TINCTURE OF IODINE IN MIDDLE EAR DISEASE.

DR. ALLYN: I would like to call attention to the use of tincture of iodine in the treatment of a species of chronic middle ear disease. To arrest discharge from an ear suffering for any length of time, I have many times been unable, with the use of all applications usually made, powdered iodoform, bichloride, and all the others I could bring into use. Many times the cause of this is the presence in the ear of a substance, whitish, tough, of an aspergillus nature. It has the faculty of reproducing in one night, all that you can remove during the previous day's work. It adheres to the skin and grows very rapidly. I have been embarrassed with several of these cases, trying nitrate of silver up to the 10th per cent. and 20th per cent. applying it to the ears after I had tested the power to bear such strong applications. Under a 2 drachm solution this seemed to thrive. I know the danger of using iodine in the middle ear. A case came to me that had been treated before, and all the applications of bichloride and of nitrate of silver in the strongest degrees failed to make any impression. I mopped the ear in the inner parts with vaseline, protecting it as thoroughly as possible. Then I made a solution of glycerine and tincture of iodine and worked upon the parts exposed, touching only the parts visible.

I succeeded in clearing that ear perfectly leaving not the slightest particle of pus. I did that in two weeks, seeing the patient each day. Another case which had been running through childhood, I succeeded a few weeks ago in stopping the discharge for about a month only. After trying all the other applications which I felt were safe, I resorted to the iodine treatment. After mopping with vaseline I first introduced glycerine into the ear, with no bad results. I then added about a tenth part of the tincture of iodine to it without bad results.

After the operation was made, I filled the ear thoroughly with clear water, followed it with

iodoform and it was the last application I needed to make.

NASAL DIPHTHERIA.

DR. GREEN: About four weeks ago I was called to see two cases of diphtheria. The family had lost two children, one of them just one week previous. The child had nasal diphtheria; the membranes had grown down so as to be distinctly perceptible. Small membranes on both tonsils. I gave large doses of calomel frequently administered, and made a tampon of absorbent cotton wet with a solution of bichloride of mercury one to a thousand, and plugged the nose as completely as I could. I allowed it to remain about twenty minutes. Before doing this I syringed the nose thoroughly with a solution of borax. I left some of the mercury solution, and told the mother to place the cotton every two hours until my return. The same evening I applied iodoform, reduced with calcined magnesia. On my visit the next day at ten o'clock the membranes had entirely disappeared from the nose. Hæmorrhages occurred infrequently, but there was no reappearance of the membranes. About one week from that time I saw a similar case in a little girl about five and a half years of age. I subjected the patient to the same treatment, and the case rapidly recovered.

DR. HUSELTON: Did the membranes from the throat disappear at the same time with the membranes of the nose?

DR. GREEN: They disappeared fully within forty-eight hours. I gave large doses of calomel, 10 grs. per hour.

DR. DAVIS: I would like to ask Dr. Green for how many hours he kept that up?

DR. GREEN: I used mild chloride of mercury in large doses frequently administered. I administered to the first patient I think about 120 grs. in the first twenty-four hours. The membranes from the throat disappeared not as rapidly as the membranes from the nose.

DR. LANGE: I desire to say that I think Dr. Green's treatment very judicious, especially the 10 grs. of calomel per hour. I myself give infants 5 grs. of calomel every hour for three or four hours without salivation, without purgation. This has been so universally my experience, that calomel does not purge in diphtheria, that I sometimes take this as a criterion as to whether I have a case of diphtheria or an aggravated case of follicular tonsillitis. In such cases, where the calomel has purged the patient, I have concluded that I had not to do with diphtheria, because of my universal experience that in diphtheria calomel in 10 gr. doses does not purge nor salivate as a rule. I remember one boy who had nasal diphtheria who received at my hands 1 oz. and a scruple of calomel during ten days and was not purged, not ptyalized, and who recovered.

DR. THOMAS: I would like to state my experience of the calomel treatment of diphtheria. Every case that was malignant and that was at all aggravated died without exception. That is the history of what I saw of this practice with the large doses of calomel.

DR. KOENIG: For my part I desire to commend Dr. Green for the other treatment, perhaps also for the calomel treatment. I think that at the present day no one denies the value of antiseptics in diphtheria, and every one will admit that all of the remedies, with the exception perhaps of some that are recognized at the present time as of no virtue in diptheria, are antiseptics. Calomel itself, I imagine, is beneficial because of its antiseptic properties. No doubt, when these large doses of calomel are administered, more or less of it becomes entangled in the meshes of the membrane. I see no reason why it should not exert its antiseptic properties.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

England as a Health Resort—Pasteur on Influenza—Specimen of a Cardiolith—Agaricin—Surgeon LeQuesne—George Moore, M.D.

Invalids who frequent foreign health resorts, and in winter flock in great numbers to Southern France or Northern Italy, do not seem to be aware that resources are presented in this respect by England. At the present time many people are singing the praises of Cornwall as a winter resort for delicate persons, and a considerable amount of useful and interesting information is to be found in a pamphlet which has recently been issued. Many long years ago the well-known writer, Dr. Paris, called attention to a good many things that appear to be more or less forgotten now, and crop up again as novelties until critics have shown that they were already known. It is sixty years ago that Dr. Paris wrote to the effect that "the very coldest parts of England were less inimical to delicate lungs than the sharp and piercing air of those places, and more particularly Montpellier (fashionable in his day), with its alternating destructive winds; and as regards Nice, though protected from the 'misteal,' yet in the spring of the year it is infested with sharp winds from the east and from the north and southeast, which are highly mischievous to the valetudinarian." It is now claimed for Cornwall by many eminent medical men that not only are its winters the mildest in the kingdom, but that for summer residents there is no purer air than that of the great tract of Moorland which forms its centre and rises to a

height of some 1,300 feet, gradually declining westward. The consequence is that January at Penzance is as warm as at Madrid, Florence and Constantinople, while July is as cool as at St. Petersburg in that month.

M. Pasteur, who has just recovered from a severe attack of influenza, has given an interesting opinion on that malady. The physiologist refuses to believe that the influenza microbe has been discovered, and thinks it is impossible to say if the disease was contagious or miasmatic. M. Pasteur, in fact, wants the microbe to be produced, but owing to the malady now afflicting so many persons, neither he nor his fellow-laborers in the laboratory have been able to assist medical men in their researches as to the cause of the epidemic. At the time of writing it is satisfactory to be able to report that there has been a very marked decrease in the number of influenza cases applying for relief at all the large London hospitals.

A most interesting specimen of a cardiolith was shown at the recent meeting of the Pathological Society of London. It appears that the child from which it had been taken was a female aged 5 years, and was seized, seven days before death, with diphtheria. She was for three days under observation, and apparently died of cardiac failure. On opening the heart a hard concretion was found in the eighth ventricle; the other lesions were the usual ones of diphtheria. The mass was situated between the eighth segment of the tricuspid valve and the inner aspect of the part of the cardiac wall forming the eighth border of the organ. It extended from the point of insertion of the valve to the basis of some of the small papillary muscles. In shape it was much flattened and irregularly rhombic, its optical section being tenticular. The longest diameter measured about three-quarters of an inch. The other measurements were, from above downwards, half an inch; from side to side, a quarter of an inch. The surface in contact with the valve was slightly nodulated; the outer surface was smooth, except at four places near the posterior end of the stone, where it was adherent to the endocardium through four short fibrous-looking bands. The cardiolith was of a yellowish-white color and looked like a small piece of bone covered with a smooth, glistening membrane continuous through the fibrous adhesions with the endocardinal membrane. The mass felt hard, but in some parts was distinctly elastic, as if the hardness were due to the presence of a thin shell of bone. The interior was rather soft and granular. On minute examination it was found to be composed of four concentric strata, (*a*) an external layer of luminated endothelium, the superficial layers of that coat being composed of well-formed endothelial cells; the deeper layers were less distinct; (*b*) the next coat was much thicker, composed entirely of rounded masses of carbonate of calcium, at places deposited in the midst of luminated fibrous tissue; (*c*) still more internally there was an irregular layer composed of more or less crystalline, transparent masses of phosphate of calcium, mixed with hæmatin and typical crystals of hæmatoidin; (*d*) forming a nucleus there was a soft material partly composed of distinct coarse fibrin filaments mixed with much granular débris, all much acted upon in weak hydrochloric acid; some pigment was also found in the nucleus. From this structure it was argued that the concretion was a cardiac thrombus or polypus partly calcified, adherent to the cardiac wall and covered with endothelium.

Agaricin, the active principle of the fungus known as agaricus albus, has been attracting more attention again lately. In doses of one-twelfth to one-sixth, or occasionally even one-fourth of a grain, it is very effective in diminishing excessive cutaneous and pulmonary secretions, and as a means of checking diarrhœa and relieving dyspepsia. In the treatment of night sweats of phthisical patients agaricin is found of the utmost value. Decidedly astringent, and acting as an intestinal tonic in small doses, it reverses this action and produces a powerfully purgative effect whenever such doses are materially exceeded, and with individuals of special idiosyncracies even one-eighth or one-twelfth of a grain may prove too much. Doses of one-twentieth of a grain repeated pretty often and administered with a little Dover's powder are then found most useful. Given conjointly with pure terebene, excellent results are stated to have been obtained, and there appears to be good grounds for according to agaricin a systematic trial.

The new Infectious Diseases Notification Act is being adopted generally by the various sanitary authorities of the country. The corporation of the city of London has just given the necessary statutory notice of its adoption in respect of the port of London. By one of its sections the provisions apply not only to houses, but to every ship, vessel, boat, tent, barn, shed or similar structure; consequently all cases of infectious disease occurring on any ship lying within the district of the port will have to be reported at once to the Medical Officer of Health.

It is stated that the Council of Kings College, London, are about to confer the distinction of an honorary fellowship upon Surgeon LeQuesne, formerly a medical student of the college, and recently the recipient of the Victoria Cross for "conspicuous bravery and devotion to duty" under fire in British Burmah.

The profession has just heard with regret of the death, at the comparatively early age of 56, of George Moore, M.D., of Hertford street, Mayfair, after a short illness. Twenty years ago he came to London as a specialist in throat and chest

affections. Her Royal Highness, the Princess of Wales, whom he attended, has expressed her deep sympathy with his family, and great personal regret for the loss of one she had known and valued for many years.

Mr. Justice Stephens has held that delirium tremens caused by drink is free from responsibility for criminal actions. G. O. M.

International Medical Congress, Berlin, 1890.

INVITATION TO THE TENTH INTERNATIONAL MEDICAL CONGRESS.

In accordance with the decision of the Ninth Congress at Washington, the Tenth International Medical Congress will be held at Berlin from the 4th to the 9th of August, 1890.

By the delegates of the German Medical Faculties and the chief Medical Societies of the German Empire, the undersigned have been appointed members of the General Committee of Organization. A Special Committee of Organization has also been appointed for each of the different Sections, to arrange the scientific problems to be discussed at the meetings of the respective Sections. An International Medical and Scientific Exhibition will also be held by the Congress.

We have the honor to inform you of the above decisions, and at the same time cordially to invite your attendance at the Congress. We should esteem it a favor if you would kindly extend this invitation to your friends in medical circles, as way may offer.

We beg to accompany our invitation by a copy of the Statutes and Programme, as also by the list of the intended Sections and their Special Committees of Organization.

DR. RUDOLF VIRCHOW, President.
DR. VON BERGMANN,
DR. LEYDEN,
DR. WALDEYER,
Vice-Presidents.
DR. LASSAR, Secretary-General.

All communications must be directed to the General Secretary, Berlin NW., Karlstrasse 19.

REGULATIONS AND PROGRAMME.

1. The Tenth International Medical Congress will be opened in Berlin on Monday, August 4, 1890, and will be closed on Saturday, August 9.

2. The Congress shall consist of legally qualified medical men who have inscribed themselves as members, and have paid for their card of membership. Other men of science who interest themselves in the work of the Congress, may be admitted as extraordinary members.

Those who take part in the Congress shall pay a subscription of 20 marks (£1 stg. or $5) on being enrolled as members. For this sum they shall receive a copy of the Transactions, as soon as they appear. The enrolment shall take place at the beginning of the Congress. Gentlemen may, however, be enrolled as members by sending the amount of their subscription to the Treasurer[1] with their name, professional status and residence appended.

3. The object of the Congress is an exclusively scientific one.

4. The work of the Congress shall be discharged by eighteen different Sections. The members shall declare upon enrolment to which Section or Sections they intend more particularly to attach themselves.

5. The Committee of Organization shall, at the opening sitting of the Congress, suggest the election of a definite Committee (or Bureau), which shall consist of a President, three Vice-Presidents, and of a number—as yet undetermined—of Honorary Presidents and Secretaries.

At the first meeting of each Section a President and certain number of Honorary Presidents shall be elected; these latter shall conduct the business of the Sections in turn with the Presidents.

On account of the different languages employed, a suitable number of Secretaries shall be chosen from among the foreign members. The duties of the foreign Secretaries shall be confined to the sittings of the Congress.

After the termination of the Congress the editing of the Transactions shall be carried out by a Committee specially appointed for this purpose.

6. The Congress will assemble daily, either for a general meeting or for the labors of the different Sections.

The general meetings will be held between 11 and 2 o'clock. Three such meetings will take place.

The time for the sittings of the various Sections will be fixed by the Special Committee of each Section, it being understood, however, that no such sittings are to take place during the hours allotted to the general meetings.

Joint sittings of two or more Sections may be held, provided that the Bureau of the Congress can offer suitable rooms for such sittings.

7. The general meetings shall be devoted to

a. Transactions connected with the work and general management of the Congress.

b. Speeches and communications of general interest.

8. Addresses in the general sittings, as well as in any extraordinary meetings which may be determined upon, can only be given by those who have been specially requested by the Committee of Organization.

Proposals relative to the fnture management of the Congress must be announced to the Committee of Organization before July 1, 1890. The

[1] Treasurer's address: Dr. M. Bartels, Berlin SW., Leipzigerstrasse 75. Please to enclose a visiting-card.

committee shall decide whether these proposals are suitable to be introduced for discussion.

9. In the sittings of the Sections, questions and problems will be discussed which have been agreed upon by the special Committees of Organization. The communications of those appointed by the committee to report on a subject shall form the basis of discussion. As far as time allows, other communications or proposals proceeding from members and sanctioned by the Committee of Organization may also be introduced for discussion. The bureau of each Section decides as to the acceptance of such offered communications and as to the order in which they shall come before the meeting, always provided that this point has not been already determined in the sitting itself by a decree of the Section.

Scientific questions shall not be put to the vote.

10. Introductory addresses in the Sections must as a rule not exceed twenty minutes in length. In the discussions no more than ten minutes are allowed to each speaker.

11. All addresses and papers in the general and Sectional meetings must be handed over to the Secretaries, in writing, before the end of the sitting. The Editorial Committee shall decide whether, and to what extent, these written contributions shall be included in the printed transactions of the Congress. The members who have taken part in the discussions will be requested to hand over to the Secretaries before the end of the day, in writing, the substance of their remarks.

12. The official languages of all the sittings shall be German, English and French. The regulations, the programme and the agenda for the day will be printed in all three languages.

It will, however, be allowable to make use of other languages than the above for brief remarks, always provided that one of the members present is ready to translate the gist of such remarks into one of the official languages.

13. The acting President shall conduct the business of each meeting according to the parliamentary rules generally accepted in deliberative assemblies.

14. Medical students and other persons, ladies and gentlemen who are not physicians, but who take a special interest in the work of a particular sitting, may be invited by the President or be allowed to attend the sitting by special permission.

15. Communications or enquiries regarding the business of separate Sections must be addressed to the managing members thereof. All other communications and enquiries must be directed to the General Secretary, Dr. Lassar, Berlin NW., 19 Karlstrasse.

SPECIAL SECTIONS—COMMITTEES OF ORGANIZATION.

Anatomy.—Fleming, Kiel; Hasse, Breslau; Hertwig,[2] Berlin, W., Maassenstr. 24; His, Leipzig; v. Kölliker, Würzburg; Kupffer, München; Merkel, Göttingen; Schwalbe, Strassburg; Wiedersheim, Freiburg.

Physiology and Physiological Chemistry.—Bernstein, Halle; du Bois-Reymond,[2] Berlin, W., Neue Wilhermstr. 15; Biedermann, Jena; Heidenbain, Breslau; Hensen, Kiel; Hüfner, Tübingen; H. Munk, Berlin; Hoppe Seyler, Strassburg; Voit, München.

General Pathology and Pathological Anatomy.—Arnold, Heidelberg; Bollinger, München; Grawitz, Greifswald; Heller, Kiel; Ponfick, Breslau; v. Recklinghausen, Strassburg; Virchow,[2] Berlin, W., Schellingstr. 10; Weigert, Frankfurt a. M.; Zenker, Erlangen.

Pharmacology.—Binz, Bonn; Böhm, Leipzig; Filehne, Breslau; Jaffé, Königsberg; Liebreich,[2] Berlin N.W., Dorotheen-Str. 34 a; Marmé, Göttingen; Penzoldt, Erlangen; Hugo Schulz, Greifswald; Schmiedeberg, Strassburg.

Internal Medicine.—Biermer, Breslau; Gerhardt, Berlin; Leube, Würzburg; Leyden,[2] Berlin W., Thiergarten-Strasse 14; Lichtheim, Königsburg; Liebermeister, Tübingen; Mosler, Greifswald; Naunyn, Strassburg; v. Ziemssen, München.

Diseases of Children.—Baginsky, Berlin; Heubner, Leipzig; Henoch,[2] Berlin W., Bellevuestr. 8; Kohts, Strassburg; Krabler, Greifswald; Ranke, München; Rehn, Frankfurt a. M.; Steffen, Stettin; Soltmann, Breslau.

Surgery.—Bardeleben, Berlin; v. Bergmann,[2] Berlin N.W., Alexander Ufer 1; Czerny, Heidelberg; König, Göttingen; v. Lotzbeck, München; Schede, Hamburg; C. Thiersch, Leipzig; Trendelenburg, Bonn; Wagner, Königshütte.

Obstetrics and Gynecology.—Fritsch, Breslau; Gusserow, Berlin; Hegar, Freiburg; Hofmeyer, Würzburg; Kaltenbach, Halle; Löhlein, Giessen; Martin,[2] Berlin N.W., Moltkestr. 2; Olshausen, Berlin; Winckel, München.

Neurology and Psychiatry.—Binswanger, Jena; Emminghaus, Freiburg; Erb, Heidelburg; Fürstner, Heidelburg; Fleschsig, Leipzig; Grashey, München; Hitzig, Halle; Laehr,[2] Berlin-Zehlendorf; Jolly, Strassburg.

Ophthalmology.—O. Becker, Heidelburg; von Hippel, Giessen; Eversbusch. Erlangen; Hirschberg, Berlin; Leber, Göttingen; Michel, Würzburg; Schmidt-Rimpler, Marburg; v. Zehender, Rostock; Schweigger,[2] Berlin N.W., Roonstr. 6.

Otology.—Bezold, München; Bürkner, Göttingen; Kirchner, Würzburg; Kuhn, Strassburg; Kessel, Jena; Lucae,[2] Berlin W., Lützowplatz 9; Magnus, Königsberg; Moos, Heidelberg; Trautmann, Berlin.

Laryngology and Rhinology.—B. Frankel,[2] Berlin NW., Neustädtische Kirchstr. 12; Beschorner, Dresden; Gottstein, Breslau; A. Hartmann, Berlin; Jurasz, Heidelberg; H. Krause, Berlin; Michael, Hamburg; Schech, München; M. Schmidt, Frankfurt a. M.

Dermatology and Syphilography. — Caspary, Königsberg; Doutrelepont, Bonn; Köbner, Berlin; Lassar,[2] Berlin N.W., Carlstr. 19; Lesser, Leipzig; G. Lewin, Berlin; Neisser, Breslau; Unna, Hamburg; Wolff, Strassburg.

Diseases of the Teeth.—Busch,[2] Berlin N.W., Alexander Ufer 6; Calais, Hamburg; Holländer, Halle; Hesse, Leipzig; Fricke, Kiel; Miller, Berlin; Partsch, Breslau; Sauer, Berlin; Weil, München,

Hygiene.—Flügge, Breslau; Gaffky, Giessen; Graf, Elberfeld; F. Hofmann, Leipzig; R. Koch, Berlin; Lehmann, Würzburg; Pistor,[2] Berlin W., v. d. Heydstr. 13; Wolffhügel, Göttingen; Uffelmann, Rostock.

Medical Geography and Climatology (History and Statistics).—Abel, Stettin; Brock, Berlin; Dettweiler, Falkenstein; Falkenstein, Lichterfelde; Finkelnburg, Bonn; Guttstadt, Berlin; A. Hirsch,[2] Berlin W., Potsdamer Strasse 113; Lent, Köln; Wernich, Cöslin.

State Medicine.—Falk, Berlin; Günther, Dresden; v. Hölder, Stuttgart; Knauff, Heidelberg; Liman,[2] Berlin, SW., Königgrätzer Strasse 46 a; Schönfeld, Berlin; Schwarz, Köln; Skrzeczka, Berlin; Ungar, Bonn.

Military Hygiene.—v. Coler, Berlin; v. Fichte, Stuttgart; Grasnick, Berlin; Grossheim, Berlin; Krocker, Berlin W., Magdeburger Platz 3; Mohr, München; Mehlhausen, Berlin; Roth, Dresden; Wenzel, Berlin.

ASSOCIATION NEWS.

Committee on Dietetics.

The Committee on Dietetics invites papers on the subject, to be read at the coming session of the American Medical Association to be held in Nashville, Tenn. Those who accept the invitation will please send their papers, or the titles of the same, to either

E. A. WOOD, M.D., Chairman,
1720 Sarah St., Pittsburgh, Pa.,

or to FRANK WOODBURY, M.D., Sec'y,
218 S. 16th St., Philadelphia, Pa.

Section of Dermatology and Syphilography.

It is desired that all those who intend to read papers in this Section at the next meeting of the Association at Nashville, Tenn., May 20–23, forward titles thereof before February 25, 1890, to

WILLIAM T. CORLETT, M.D.,
333 Prospect St., Cleveland, O.

MISCELLANY.

STERILIZED LINT.—M. Regnier renders lint sterile by heating it to a temperature of 120° C. (248° F.) He had tested the antiseptic value of lint thus prepared in dressings applied after operations of various kinds, with good results. At a recent surgical congress he stated that he considered sterilized lint equal to antiseptic dressings.

THE dengue fever has been epidemic at Smyrna, and has attacked four-fifths of the population of one hundred and fifty thousand.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from January 25, 1890, to January 31, 1890.

Major Johnson V. D. Middleton, Surgeon U. S. A., is granted leave of absence for fifteen days. Par. 9, S. O. 21, A. G. O., Hdqrs. of the Army, January 25, 1890.

Capt. C. N. Berkeley Macauley, Asst. Surgeon, extension of leave of absence granted in S. O. 294, A. G. O., December 18, 1889, is further extended one month, by direction of the Secretary of War. Par. 1, S. O. 22, A. G. O., January 27, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending February 1, 1890.

P. A. Surgeon C. W. Rush, detached from Naval Academy, and placed on waiting orders.

Asst. Surgeon C. J. Decker, ordered to the Naval Academy, February 1.

P. A. Surgeon E. H. Green, detached from the "Alert" and placed on waiting orders.

Medical Inspector G. S. Beardsley, granted extension of leave to April 30, with permission to remain abroad.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, from December 1, 1889, to January 25, 1890.

P. A. Surgeon S. T. Armstrong, assigned to command hospital at New Orleans, La., when relieved at Cleveland, O. January 13, 1890.

P. A. Surgeon S. C. Devan, granted leave of absence for fourteen days. December 21, 1889, and January 16, 1890.

P. A. Surgeon P. C. Kalloch, to proceed to Portland, Ore., for temporary duty. December 21, 1889.

P. A. Surgeon E. Wasdin, granted leave of absence for nineteen days. December 16, 1889, and January 7, 1890.

P. A. Surgeon P. M. Carrington, to proceed to Cleveland, O., when relieved. January 13, 1890.

P. A. Surgeon W. D. Bratton, granted leave of absence for twenty-one days. December 19, 1889.

Asst. Surgeon S. Norman, relieved from duty at New York; to rejoin station, Evansville, and transfer property. January 18, 1890.

Asst. Surgeon J. B. Fattic, to join station, St. Louis. December 19, 1889. Granted leave of absence for thirty days. January 25, 1890.

Asst. Surgeon F. C. Heath, granted leave of absence for eleven days. December 3, 1889.

Asst. Surgeon J. B. Stoner, to rejoin station, New York. December 23, 1889. Detached and directed to report for duty on floating hospital "Stevens" at Baltimore, Md. January 18, 1890.

Asst. Surgeon A. W. Condict, to proceed to St. Louis, Mo., for temporary duty. December 16, 1889. To rejoin station, Louisville, for temporary duty. December 23, 1889.

Asst. Surgeon G. M. Guitéras, granted leave of absence for twelve days. December 16, 1889.

Asst. Surgeon J. C. Perry, granted leave of absence for ten days. January 8, 1890.

CASUALTIES.

Surgeon C. B. Goldsborough, died January 5, 1890.

Asst. Surgeon J. B. Fattic, resignation accepted by the President, to take effect February 28, 1890. January 25, 1890.

[2] Managing members.